Hamid Ouali

Agreement, Pronominal Clitics and Negation in Tamazight Berber

A Unified Analysis

Continuum Studies in Theoretical Linguistics

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Contents

Acknowledgements		vi
Preface		vii
Symbols and Abbreviations		viii
Chapter 1	Introduction	1
Chapter 2	Background on the Berber Language	7
Chapter 3	Agreement: From GB to Minimalism	13
Chapter 4	Tamazight Verb Morphology and Clause Structure	37
Chapter 5	Subject-Verb Agreement and Agreement Suppression Effects	75
Chapter 6	Object Pronominal Clitics	105
Chapter 7	Clitic Doubling	129
Chapter 8	Negative Concord	143
Chapter 9	Agreement Suppression Effects and Unification via Agree	167
Chapter 10	Conclusion	173
Notes		175
Bibliography		181
Index		189

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Preface

The work represented in this book is an extension of some proposals and analyses that have been made in Ouali (2008), (2005), and (2003). Some of the analyses developed and argued for in those articles and in this work originated in my Ph.D. dissertation which I did at the University of Michigan-Ann Arbor in 2006. The main goals I hoped to have achieved then are the same goals I have here. Some of the arguments I made there are sharpened and strengthened here.

Goals

My broad goals are: 1) Describe some grammatical properties of Tamazight Berber and bring to light some novel facts which might have important implications about the current syntactic theory, 2) Unify three seemingly disparate phenomena namely: Subject-verb agreement, Clitics and Clitic-doubling, and Negation and Negative-Concord, as forms of Agreement, 3) Argue that Chomsky's (2005) feature inheritance theory according to which C is the locus of φ-features and T inherits these phi-features in the course the derivation allows three theoretically possible and empirically attested mechanisms: 1) T inherits C's phi-features, 2) T does not inherit C's phi-features, and 3) C and T share C's φ-features.

Symbols and Abbreviations

ACC	Accusative
Asp	Aspect
AspP	Asp Phrase
AOR	Aorist Aspect Form
Agr	Agreement
CL	Clitic
Comp	Complementizer
CP	Complementizer Phrase
DAT	Dative
f	feminine
Fut	Future
INFL	Inflection
IMP	Imperfective
m	masculine
Neg	Negation
NegP	Negation Phrase
NP	noun phrase
Par	Participle
PER	Perfective
p	plural
S	Sentence
s	singular
TP	Tense Phrase
VP	Verb Phrase
QTB	Quebliyeen Tamazight Berber

Chapter 1

Introduction

Despite a rich body of descriptive work on the different dialects of Berber, the grammatical properties of this language remain in many respects unexplored. This book will investigate Agreement Phenomena, one of the most notable aspects of the syntax of Tamazight Berber, especially the dialect spoken in the Quebliyeen region in Khemisset Province, Morocco, and to which I will refer from here on as Quebliyeen Tamazight Berber (QTB). I aim to present an accurate description of this system and to investigate its theoretical implications concerning the human language faculty. The major goal of this work is to propose a novel approach to Agreement and Anti-Agreement, given a Feature-Transfer model advanced in Chomsky (2004, 2005, 2006). Although most of the data is from QTB, cross-dialectal and linguistic comparison is invoked when necessary. However, the theoretical claims and predictions made in this work remain modest and are not necessarily claims for all the 500 or more Berber dialects and languages. A more detailed micro-comparative study would be needed to account for agreement in all Berber languages, which is beyond the scope of this book.

Agreement as a phenomenon refers, in part, to the ways in which grammars mark a relationship between a predicate and an argument; however, this is just one of the multiple ways in which agreement is manifested. As a formal notion, agreement has proven hard to define, as characterized by Anderson

> This is a quite intuitive notion which is nonetheless surprisingly difficult to delimit with precision. (1992: 103)[1]

In order to understand this phenomenon, one has to look at it from different angles and tease apart the different interpretations of the term

"agreement." First, at the morphological level, agreement is a morphophonemic manifestation. For example, looking at the two examples below from English and QTB respectively, the boldfaced parts of the verb are the *agreement morphemes* that indicate a *relation* between a/some feature(s) of the subject (e.g. in English, the subject is third person singular) and the verb:

(1) Mary read**s** lots of books. (*-s* is a third person singular marker)

(2) **θ**qra Məryəm θabrat (***θ***- is a third person singular feminine marker)
3sf.read.PER Meriam letter
"Meriam read the letter"

In a sense there is a "co-occurrence restriction" between the subject argument and the type of agreement affix realized on the predicate. Chapter 3 will have further discussion of agreement as a morphological notion.

From a syntactic angle, agreement refers to the *structural* relation under which the morphological agreement is obtained. In the generative linguistics tradition, this relation has received different analytic treatments. It was analyzed as requiring a "Government" relation in the Government and Binding (GB) theory (Chomsky 1981), as requiring a Spec(iffier)-Head (Spec-head) relation in Principles and Parameters theory and early Minimalism (Chomsky 1995),[2] and as an Agree relation in current Minimalism (Chomsky 2000, 2001a, 2004, 2005). Chapter 3 will put all these different analytic treatments in their historic perspective reviewing briefly the reasons for this evolution.

This book is concerned with the latter aspect of agreement, namely the syntactic configuration under which two lexical elements (for example the subject and the verb in (1) and (2)) come to ***Agree***, that is **share certain features**. The elements that show some type of agreement are not restricted to arguments and predicates. Languages exhibit a variety of contexts where other elements must agree; such as clitic doubling. In clitic doubling contexts, as shown by the QTB example in (3), the pronominal clitic "her" must *agree* with the object *thrbat* [θərbat] "girl" in person, gender, number and (presumably) morphological Case.

(3) urix-**as** i-θərbat θabrat
write.PER.1s-**her** to-girl letter
"I wrote the girl a letter"

Different analyses have been proposed to deal with the phenomenon of clitic doubling. For example, Borer (1984) and Jaeggli (1986) argue that clitic doubling involves a co-indexation relation between the clitic and the noun it doubles. Chapter 6 reviews the major analyses proposed for clitic pronouns, and proposes an analysis of pronominal clitics in Berber. Chapter 7 discusses clitic doubling and analyzes this phenomenon as a form of agreement.

A third example of "agreement" is negative concord where two or three negative items agree by sharing the same negative feature as shown in the QTB example in (4).

(4)

sha	**-ur**	iddi	**agidʒ**
Neg2	-Neg1	go.PER.3s	no one

"No one left"

Ouali (2003, 2005) provides an analysis of sentential negation that captures the variation in the strategies used to express negation across Berber dialects, and argues that the negation element *ur* is generated as the head of a Negation Phrase (NegP) and that *sha* is base-generated lower in the structure and then moves to Spec of NegP. Therefore, *sha-ur* is a derived order as opposed to French *pas-ne* "Neg2-Neg1," which was argued to be a basic/underlying order (Pollock 1989). I also propose that *sha* is licensed via c-command and so are negative expressions such as *agidge* "no one" and *walu* "nothing," extending in this respect Zanuttini's (1991, 1994) approach to Romance. I propose following Watanabe (2004) that negative licensing is an agreement relation. Chapter 8 discusses this topic in detail.

To summarize, these three different phenomena—that is, argument-predicate agreement, clitic doubling, and negative concord, as summarized above—have been analyzed as different and unrelated, requiring three different mechanisms: Spec-head relations, co-indexation and licensing via c-command respectively. One of the goals in this book is to show that explaining these three phenomena does not require disparate mechanisms as part of our computational system but reflect only one relation that is, Agree, as formally defined in Chomsky (2001a, 2004).

Another major goal of this book is to propose a significantly new approach to the so-called Anti-Agreement effect, in light of Chomsky's work (2004, 2005, 2006), where he hypothesizes that T inherits its φ-features from C. Subject-verb agreement results from T entering into a Probe-Match

relation and Agree with the subject. I propose that the hypothesis that C is first merged bearing φ-features allows three logical possibilities namely: (a) T inherits its φ-features from C, (b) T does not inherit φ-features from C (C keeps these features and does not transfer them to T), and (c) T inherits φ-features from C but C keeps a copy of these features. I provide strong empirical evidence for all these options and argue that this proposal deduces the so-called Anti-Agreement effect, and solves the Probe-Goal dual activation puzzle in English wh-questions and negative sentences.

The analysis is couched within the Minimalist Program, an approach which, like any other scientific endeavor, seeks to increase explanatory depth over a wide range of empirical phenomena, and maximize explanatory depth through minimization and simplification of theories, by postulating the smallest and simplest, that is minimal, set of premises (see Epstein et. al. 1998, Brody 1995, Epstein and Hornstein 1999; Epstein and Seely 2002, 2006 and forthcoming; Frampton and Guttmann 1999; and references therein).[3] This book aims to provide evidence that a wide range of apparently different and seemingly irreconcilable empirical facts can be generated by a single mechanism, aspects of which are perhaps not specific to the language faculty but reduce to 3rd factor (e.g. minimal search, see Chomsky 2005).

This book is organized as follows: Chapter 2 provides a background on the Berber language. Chapter 3 discusses agreement as a morphological notion and as a syntactic notion and explores the latter as one primary focus of this book. I provide a short background on the different analytical treatments agreement has received in the generative tradition starting with GB and ending with very recent Minimalism. I will adopt a Probe-Goal Agree approach first advanced in Chomsky (2001a). Chapter 4 discusses the clause structure and some aspects of Berber syntax such as word order, Tense and Aspect and complex tense. Chapter 5 provides a theory of Agreement and Anti-Agreement. I adopt Chomsky's (2005, 2006) hypothesis that T inherits its φ-features from T and then show that this hypothesis should theoretically allow three logical possibilities namely: (a) DONATE: C transfers its φ-features to T and does not keep a copy of these features, (b) KEEP: C does not transfer its φ-features to T at all, and (c) SHARE: C transfers its φ-features to T and keeps a copy. I show DONATE generates declarative sentences, KEEP yields the so-called Anti-Agreement Effect, and SHARE yields both T-agreement and C-agreement. Chapter 6 analyzes

the distribution of object pronominal clitics in Berber and argues that these clitics are merged as clitic heads in the functional domain following Sportiche (1992). I argue against two hypotheses: the first claims that clitic distribution is derived by clitic head movement, and the second claims that it is derived by clitic XP-movement. In Chapter 7 I analyze clitic doubling as a form of agreement and show that, just as subject extraction affects agreement in Berber yielding AAE, indirect object extraction yields a ban of clitics. I provide an analysis that shows why this is the case. In Chapter 8 I analyze negative concord as another form of agreement. I argue that if one takes a widely accepted approach such as Zanuttini's (1996) who claims that Neg selects T universally, one will have to address the question of how C transfers its φ-features to T with a Neg-head intervening. I propose that C transfers its φ-features to Neg which transfers them to T and provide empirical evidence that supports this hypothesis.

Before we review the evolution in the treatment of agreement in the generative tradition and analyze agreement in Tamazight in light of the recent Minimalist assumptions, we deem it important to provide a short background on the Berber language. The reader who is familiar with this language can jump ahead to Chapter 3.

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Chapter 2

Background on the Berber Language

Berber is an Afro-Asiatic language spoken in North Africa namely in Morocco, Mauritania, Algeria, Tunisia, Libya, and the Oasis of Siwa in Egypt. It is a continuum of dialects, some of which are not mutually intelligible. In addition to these countries, it is also spoken in large parts of the Sahara in Mali, Niger, and Chad. The Berbers have inhabited North Africa for thousands of years and their language has survived different invasions and contact with the Roman, Vandal, Byzantine, and Arabic languages and civilizations. Today this language is still spoken in all the aforementioned countries, thriving is some and dwindling in others.

2.1 The People

The term widely used to refer to this population is "Berbers," a term that some Berbers dislike and take offense at because of its origins. Imazighen [imaziɣən] is the term they prefer to use, to identify themselves and Tamazight [tamaziɣt] is the language they speak.[1] The term Berber is of external origin and there are different theories as to the origin the word. Some argue that it is from the Greek word for "barbarian" which meant someone who spoke a foreign language. Ruedy writes:

> The word Berber goes back to the Greeks, who called the people they found living in the Maghreb at the dawn of history barbarians, a terminology subsequently adopted in various forms by Romans, Arabs, Europeans, and others. (2005: 9)

Others attribute the term to the language itself and the way it sounds. The Arab historian Ibn Khaldoun writes:

> Their language is not only foreign but of a special kind, which is why they are called Berbers. It is said of Ifriqish son of Qays son of Sayfi, [. .] that he encountered this strange race with its peculiar tongue and struck with amazement exclaimed "what a *barbara* you have!" for this reason they were called Berbers. (cited in Brett and Fentress 1996: 4)

Ruedy (2005) argues that the literature on the origin of the Berbers is "full of problems" and "ambiguities." He states that the balance of opinion on this issue currently holds that the Berbers of history were the descendents of the Paleolithic group which was then mixed with other races from Western Europe, sub-Saharan Africa, and to a great extent with races from the northeast and the southeast. According to Brett and Fentress (1996) Imazighen people are "extremely heterogeneous."

Language seems to be the only badge of identity an Amazigh (a Berber) holds and the major factor taken into consideration when trying to figure out the number of Imazighen in North Africa. Today Berber speakers constitute about 40 percent of the Moroccan population of over 33 million people. They constitute 20 percent of the Algerian population of over 34 million people. In Tunisia, Libya, and the Oasis of Siwa in Egypt the number of speakers is very small and is dwindling every year. The Tuareg are found in large parts of the Sahara in Niger and Mali and their number is estimated between 600,000 and 1,600,000 (Brett and Fentress 1996).

2.2 The Language

Berber belongs to the Afro-Asiatic language family which comprises of: Berber, Semitic, Cushitic, Egyptian, and Chadic. The different Berber varieties have been characterized as languages by some authors and as dialects by others. There is not a clear criterion besides the mutual intelligibility or lack thereof as a dividing line between a dialect and a language.

I will use the term "dialects" without any preconceived definition for the term.

When the Arabs came from the Arabian Peninsula to Morocco and North Africa in general in the seventh century AD, they introduced Islam and Arabic to the Berbers. Arabic was mainly the language of worship and gradually became the language of literacy. The Berber language in North Africa was not written, unlike in Niger for example, but the Berbers have managed to maintain their language for generations (Idrissi 2003).

In the twentieth century, the situation changed drastically especially after Morocco gained independence from France in 1956. Getting an education required knowledge of Arabic and Berber children and youth started to view their language as a disadvantage. This language was completely marginalized in the education system and in the language policies of the government (Boukous 1998, 2003). Being a former French colony, the French language was also still dominant in this country. The winds of globalization introduced more pressure from the spread of the English language also especially through the internet. The language policy had always been strengthening the Arabic language on the expense of Berber.

In the twenty-first century, new changes are being introduced and this language is currently undergoing a remarkable transformation and resurgence in Morocco. The government of Morocco finally recognized Berber as one of the country's important languages and for the first time the Moroccan television started broadcasting Berber programs in three major dialects. The most significant development however, is the introduction of a legislation which requires every public school to teach the language by 2010. To achieve this goal, top Berber researchers were brought together under one roof with the creation of the Royal Institute of Amazigh Culture (Boukous 1998, 2003). This task force decided on a writing script and on one standardized language instead of the current three major dialects (Tamazight, Tashelhit, and Tarifit) and their sub-varieties.

The task to standardize this language is by no means an easy one considering the big variation among the Berber dialects. It is hard to put a number to the different dialects and sub-dialects that are currently spoken in Morocco or in all the different countries for that matter. Some scholars

estimate this number to be around three hundred or more local dialects (Abdel-Massih 1971). Others, like Andre Basset, estimate the number to range from several hundreds to four or five thousand local dialects (cited in Penchoen 1973: 1). However, there seems to be a consensus among all Berberologists that there are four major dialectal groups. Abdel-Massih (1971) classifies Berber dialects into the following four groups:

I. Tamazight: Spoken in the Middle Atlas Mountains in Central Morocco. It consists of these major tribal dialects:

   Beni Ouarain, Ayt Morghi, Ayt Alaham, Ayt Youb, Marmoucha, Ayt Seghrouchen, Ayt Youssi, Beni Mguild, Zaiane, Zemmour, Ayt Rbaa, Ayt Seri, Beni Mtir, Guerouane. Ayt Segougou, Ayt Morghad, Ayt Ayache, Ayt Hdiddou, Ayt Izdeg, Ayt Sokhmane, Ayt Atta.

II. Tashelhit: Spoken in the High and Anti-Atlas and the Sous Valley in Southern Morocco.

III. Zenatiya: it consists of the following major dialects:

   Tarifit: Spoken in northern northeastern Morocco.
   Taqbaylit: Spoken by the Qbayel tribes in Algeria.
   Zenatiya: Spoken by the Mzabites of Ghardaia in the Mzab region in Algeria.

IV. Tamasheq: Spoken by the Tuareg tribes in Mauritania, Mali, and Niger.

(Abdel-Massih 1971: ix–x)

Abdel-Massih (1971) focused on Tamazight of Ayt Ayache and Ayt Seghrouchen in Morocco, therefore he gave a detailed classification of the Tamazight dialectal family. The other three major dialects certainly consist of subgroups as well which are not reflected in his classification.

The focus of this book is on Quebliyeen Tamazight Berber (QTB), a Zemmour dialect which belongs to the Tamazight group. "Zemmour" is the term used to refer to the group of Berber speakers in and around Khemisset province, located about 40 miles west of Rabat the capital of Morocco. Quebliyeen is the name of the tribe that the author of this book belongs to and QTB is the major source of data in this work. Before discussing some grammatical properties and the clause structure of

QTB, in the next chapter we will take on the issue of agreement and the evolution of its treatment in the Generative tradition. The discussion in the next chapter will be familiar ground to those who know Generative literature and readers who do not need this background can skip to Chapter 4.

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Chapter 3

Agreement: From GB to Minimalism

3.1 Agreement as Morphological Inflection

"Agreement as morphological inflection" refers to the affix that a lexical category, normally a predicate such as a verb as in (1) or an adjective as in (2), or a functional category such as an auxiliary as in (3), or a complementizer and a negation, bears when it co-occurs with a noun as shown in (1), a pronoun as shown in (4) or a covert pronoun as in (5).

(1) **John** read**s** lots of books.

(2) **al-banaatu** tawilaa**tun** (Standard Arabic)
The-girls tall-3pf
"The girls are tall"

(3) **John** ha**s** not read lots of books

(4) **θ**ddad **ntaθ** (QTB)
3sf.come.PER she
"She came"

(5) **θ**ddad (Tamazight Berber)
3sf.came
"She came"

The subject and the verb are said to agree when they have matching features and co-occur within a given syntactic domain. The verb's Agreement features are manifested by the agreement inflection. There are three types of Agreement features provided by UG, although their phonetic manifestation differs cross-linguistically: Person, Number and Gender.

These features are referred to as "phi-features" (or φ-features) (Chomsky 1981).

Verbs in Tamazight Berber are inflected for subject agreement. The agreement affix can co-occur with an overt subject, as illustrated in (6), or a covert subject as in (7).

(6) ytʃa wərba θamən
3s.eat.PER boy honey
"The boy ate honey"

(7) ytʃa θamən
3s.eat.PER honey
"He/the boy ate honey"

The surface position the subject occupies in the Tamazight clause structure does not affect agreement. Full subject-verb agreement is realized on the verb regardless of whether an overt subject is post-verbal as in (8) or pre-verbal as in (9):

(8) tʃan waraw θamən
3p.eat.PER boys honey
"The boys ate honey"

(9) araw tʃan θamən
boys 3p.eat.PER honey
"The boys ate honey"

In Tamazight, as is the case in other Berber dialects (Ouhalla 2005b), the agreement morpheme is clearly separated from the tense morpheme as shown in (10), whereas in English this is not the case, as shown in (11):[1]

(10) da **t**-ddu-**θ** (**t** . **θ** = Agreement)
will 2s-leave-2s.AOR (AOR= Aorist aspectual form)
"You will leave/go"

(11) Maria read**s**

The morphological status of agreement as well as the question of whether word formation is syntactic or morphological, is beyond the scope of this book; the literature on this issue is vast (see Borer 1998 and

references cited therein for detailed discussion, and see Ouhalla 2005b for an analysis of Berber). This work addresses a rather different question, and that is: "Under what syntactic relation is agreement morphology realized?" The general view that has been widely adopted in the generative literature is that the syntax establishes the domains under which Agreement features of two elements, for example a subject and a predicate, are matched and then later on spelled out on the predicate in the morphological component. In the next section I will review the different analytical treatments that agreement has received throughout the major recent developments of generative syntax, mainly in Government and Binding (GB) (Chomsky 1981, 1986), Early Minimalism (Chomsky 1995 and references therein) and recent Minimalism (Chomsky 2000, 2001a, 2004, 2005, 2006 and references therein).

3.2 Agreement as a Syntactic Relation

3.2.1 INFL, AGR and Government

Chomsky (1981) introduced in the GB framework a detailed and articulated clause structure that reflected the subject-predicate relation mediated by a node labeled INFL(ection). This was expressed in the following phrase structure rule:

(12) S → NP INFL VP

In English, Infl (henceforth I), has two main functions: it is a place holder for both tense and agreement morphology and it assigns Nominative Case to the subject. In Chomsky (1981) the tense and agreement morphemes are base-generated in Infl and undergo affix hopping, presumably a morpho-phonological operation, onto the verb. The subject in this respect "technically" agrees with Infl which hosts the Agreement features and it is the agreement on Infl that assigns Case to the subject, as stated below:

> The element AGR [. .] assigns Case in INFL [. .] Subjects are nominative when they agree with the matrix verb -technically, with its inflection. (Chomsky 1981 p. 52)

Agreement at this point is considered a syntactic element with the categorical features [+N, -V, +INFL], not a syntactic relation or structural configuration under which two elements have to occur in order to "agree" Chomsky writes:

> The "inflection" element INFL may, in turn, be [± Tense], i.e., finite ([+Tense]) or infinitival ([-Tense]). If finite, it will, furthermore, have the features person, gender and number; call this complex AGR ("agreement"). The element AGR is basically nominal in character; we might consider it to be identical with PRO and thus to have the features [+N, -V]. If so then we may revise the theory of government, taking AGR to be the governing element which assigns Case in INFL. Since [+N, -V] is not generally a Case-assigner, we must extend the theory of Case so that [+N, -V, +INFL] is a Case-assigner along with [-N], regarding [+INFL] as basically "verbal," if we take AGR to be nominal. INFL governs the subject if it contains the AGR, then assigning nominative Case by virtue of the feature [+INFL]. (1981: 52)

There is a lot to be said about this statement and discussing all it contains in detail requires a separate study (see relevant discussion in Rizzi 1982, Reuland 1983 and Stowell 1982). However, I will focus mainly on two major points; the first is the assumption that agreement, now "AGR," is nominal [+N] and inflectional [+INFL], and the second is Government as a structural relation. Regarding the categorial status of AGR, Chomsky wanted to distinguish AGR from nouns and PRO which are both [+N, -V] (i.e. Nominal), by adding the feature [+INFL], which now gives AGR the ability to assign Case, akin to verbs. This is the case of sentences with finite INFL, as shown in (13).

(13) He do**es** not like milk.

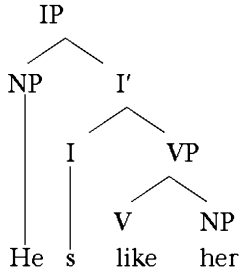
Sentences with a non-finite INFL do not have morphological tense and, in English, do not have φ-features either, as shown in the embedded clause in (14).

(14) Mary wants [him **to** leave tomorrow]

The "complex AGR" has a set of features, which include (besides tense and φ-features) its categorial features. The point that I want to highlight here is

that AGR or agreement is not a structural relation but it enters into one itself, namely Government. Government played a key role in unifying all the different modules of the grammar in GB. Thematic roles for example are assigned under Government, and so is Case. Notice that the configuration that the verb and its complement (Object) are in (15) is different from the configuration that Infl and the subject are in. The first one is a head-complement relation. The second one, on the other hand, is a Spec-head configuration.

(15)



The verb assigns Accusative Case to the object under Government, which was initially defined as mutual c-command:[2]

(16) Government

α governs β iff

(i) α c-commands β, and

(ii) β c-commands α

(17) C-Command

α c-commands β iff

(i) α does not dominate β;

and (ii) β does not dominate α; and

and (iii) the first branching node dominating α also dominates β;

and (iv) α does not equal β.

Notice that according to this definition of Government, V governs the NP object and assigns it Accusative Case, whereas Infl or "I" does not govern the Subject. This would consequently mean that Nominative Case could not be assigned under this definition of Government. It was assumed in Chomsky (1981) that the subject gets Nominative Case by virtue of

occupying Spec of IP, therefore being in a Spec-head relation with Infl. This situation led to a revision of the notion of Government to unify the mechanism under which all arguments and expletives get Case hence the relation m-command was advanced:

(18) Government

α governs β iff

(i) α m-commands β, and

(ii) β m-commands α

(19) M-Command

α m-commands β, iff

(i) α does not dominate β;

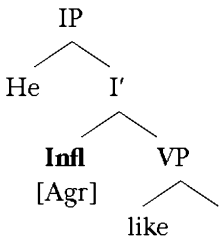
and (ii) β does not dominate α;

and (iii) every maximal projection dominating α also dominates β;

and (iv) α does not equal β.

In this way, both the subject and the object are assigned Case under a unified relation of Government, hence Spec-head as a relation under which Case is assigned falls under this definition of Government. Returning to the main topic of our discussion (namely, agreement), the subject agrees with a governing Infl, since according to Chomsky (1981), the AGR element of Infl is +Tense and has AGR, which carries person, number, and gender (φ-features), that is, AGR is [+Infl] and therefore assigns Nominative Case to the subject under this structural configuration.

(20)



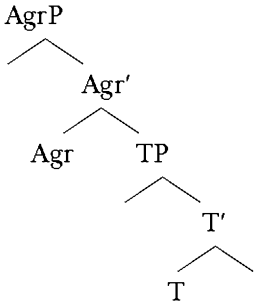
The next development that agreement underwent in generative syntactic theory was, on the one hand, a radical shift, and on the other hand a revival of early existing relations. It is a radical shift because agreement is no longer treated as an entity that enters into syntactic relations, such as

Government, but is itself treated as a syntactic relation, first defined in terms of Spec-head relation and later specified as Agree. It is a revival of early existing relations because in Early Minimalism, Chomsky (1993, 1995), Spec-head was **re-introduced** as a syntactic relation under which agreement is obtained and in later Minimalism, Chomsky (2001a, 2004), it was eliminated for the second time and replaced by Agree, a Probe-Goal relation defined under c-command, the same configuration that underlined Government.

3.2.2 Agreement as Spec-Head relation

With the adoption of a split Infl (Pollock 1989) by Chomsky (1995), clause structure became even more articulated with two different functional (Infl) projections namely Agr(eement) P(hrase) and T(ense) P as the projections of agreement and tense in X′-terms.[3] Pollock's (1989) original approach has TP dominating AgrP, but Belletti (1990) argues that AgrP dominates TP since in Romance tense inflection is closer to the verb root than agreement (V-T-Agr), and this ordering can be derived by successive-cyclic head movement only if T^0 was lower than Agr^0, an assumption that Chomsky adopts:[4]

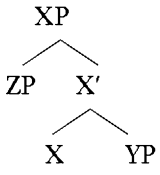
(21)



One of the major changes that Minimalism introduced (Chomsky 1995 and references therein) is to seek to dispense with the levels of representation known in GB as D-structure and S-Structure. With these two levels out of the picture, a number of conditions and filters that were analyzed to hold exclusively at either level were also out of the picture, and the phenomena they were used to account for needed new explanation. Within

Minimalism, derivations proceed to satisfy bare output conditions, namely PF and LF requirements. Among these requirements is the assumption that any uninterpretable features at each of these levels must be deleted before the interfaces are reached, otherwise the derivation does not "converge." Government as a structural relation was also dispensed with, and syntactic relations reduced to the head-complement relation (sisterhood) and Spec-head relation (m-command) (see Chomsky 1995, see also discussion in Epstein et al. 1998 and references therein). In chapter 3 of Chomsky (1995), Chomsky proposes a revision of X-Bar theory. His main point is to maintain the minimal and local syntactic relations in the X-bar structure, which are the Spec-head relation and the head-complement relation:

(22)



> The narrowest plausible hypothesis is that X-bar structures are restricted to the form in (1) [(22) above]; only local relations are considered (hence no relation between X and a phrase included within YP or ZP); and head-complement is the core relation The vision of a minimalist program explored here requires that we keep to relations of these kinds, dispensing with such notions as government by a head (head government). But head government plays a critical role in all modules of grammar; hence, all of these must be reformulated, if this program is to be pursued. (Chomsky 1995: 172–3)

This has implications for how the subject-verb agreement is obtained and how the subject is assigned Nominative Case. As I discussed in the previous section, within GB, Nominative Case was assigned under Government by an m-commanding finite Infl. With this new development Case is viewed as a "manifestation" of the Spec-head relation between an NP and Infl. In addition to Case, morphological agreement or subject-verb agreement also becomes a manifestation of the Spec-head relation. In other words, a verb and a subject agree if they enter into a Spec-head relation at some point of the derivation. However, unlike morphological

agreement, which is a property of Agr, Case is a property of T, therefore Chomsky proposes that T in (21) raises to Agr forming "[$_{Agr}$ T Agr]," while:

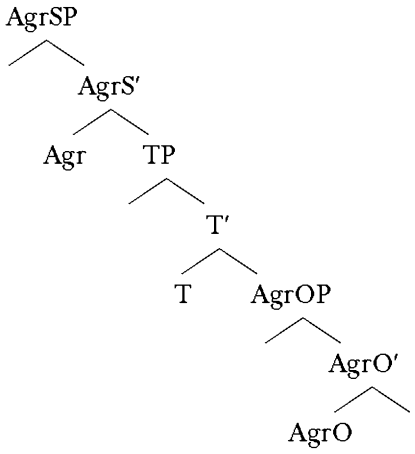
> agreement is determined by the φ-features of the Agr head of the Agr complex and case by an element that adjoins to Agr (T [. .]). An NP in the Spec-head relation to this Agr complex bears the associated case and agreement features. The Spec-head and the head-head relations are therefore the core configurations for inflectional morphology.[5] (Chomsky 1995: 174)

As Belletti (2001) notes, the phenomenon of subject-verb agreement is obtained as a result of two operations: the first is the agreement relation between the subject in [Spec AgrP] and the Agr head, and the second is the realization of the features of Agr on the verb, either in the lexicon or through incorporation of V into Agr (as in Baker's 1988 incorporation framework). Chomsky (1995) adopts what is referred to as the lexicalist hypothesis and argues that the verb appears in the lexicon and is syntactically inserted fully inflected for tense and agreement, and in the overt syntax or at LF (for English), this inflection is subject to feature checking against the features of the functional heads T and Agr respectively. Matching features between the verb and T/AGR are supposed to "erase" after successful checking, which is undertaken through head movement. The Spec-head relation is the other checking configuration, under which a DP checks its φ-features and Case against the complex Agr.

The Spec-head relation, which is also a checking configuration within Chomsky's (1995) Checking framework, has been referred to as "Spec-head agreement." With this development, agreement is treated as a syntactic relation which is basically a structural configuration under which "agreement morphology" is obtained, or under which Agreement features are checked. It is important to note here that Spec-head agreement requires movement, be it overt (e.g. with subjects in English) or covert (e.g. with objects in English). Before mentioning how the distinction between the two types of movement is captured, something needs to be said about how objects get Case within the Checking framework. With the elimination of Government and the introduction of Spec-head as a configuration

under which subjects have their Case checked, Chomsky extends this same checking mechanism to objects as a way of unifying Case checking by proposing that the functional domain in the structure contains (besides AgrSP and TP) AgrOP, as shown in (23).[6]

(23)

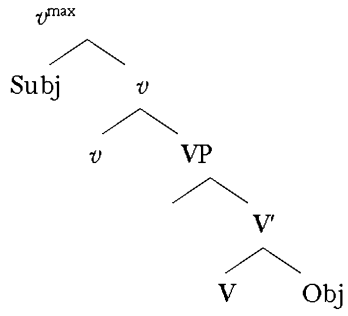


The direct object in English, for example, gets its Accusative Case checked by moving to [Spec, AgrO] "covertly," therefore Case Filter cannot apply at the overt—Surface Structure—level. The difference between "overt" movement and "covert" movement is captured in terms of feature strength (Chomsky 1995). Subjects move overtly in English because the T head has a strong "D/EPP" feature that attracts a subject whereas AgrO has a weak D-feature therefore the object does not move until LF (in Chomsky 1995). However, Chomsky (1995, chapter 4) dispenses with Agr projections entirely and argues that subject agreement is a property of T^0. Chomsky writes:

> Functional categories have a central place in the conception of language we are investigating, primarily because of their presumed role in feature checking, which is what drives Attract/Move. We have considered four functional categories: T, C, D and Agr. The first three have Interpretable features, providing "instructions" at either or both interface levels. Agr does not; it consists of –Interpretable formal features only. We therefore have fairly direct evidence from interface relations about T, C, and D, but not Agr. Unlike the other functional categories, Agr is present only for theory-internal reasons. (Chomsky 1995: 349)

With this development, the subject is taken to check its φ-features and Case against the Agreement features of T by moving to [Spec, TP] and entering into Spec-head agreement with T, whereas object agreement becomes a property of *v*. Chomsky argues that in languages with overt object movement or so-called "Object Shift" (Holmberg 1986, 1999), *v* is marked for a D feature that requires movement of a DP to [Spec, *v*]. Given the structure below (from Chomsky 1995: 352), although the subject is base-generated in Spec-*v*P, it does not check the D feature of *v* because, according to Chomsky, it does not "head a nontrivial chain."

(24)



The subject was first merged in Spec-*v*P and did not move to that position, which means it was not attracted by *v* to that position. In a way, a Case assigning head has to establish a relation with an argument via c-command, and in the context of Chomsky (1995 chapter 4), this relation is *Attract*. The attracted DP then moves to the Spec of the attracting head and by virtue of being in a Spec-head relation and also being a head of a "nontrivial chain" it can have its Case checked. Looking at the structure in (24): first, the subject was merged in [Spec- *v*P] and did not enter into an *Attract* relation with *v*, and second it is not a head of a "nontrivial chain," and therefore does not get Case checked by *v*. The object on the other hand is first merged as a complement of V; when *v* is merged it can *Attract* the object and when the object moves to Spec-*v*P, which allows multiple Specs, the object gets its Accusative Case feature checked. This intriguing analysis is in a number of ways a precursor to the next development and new analytical treatment of agreement in Chomsky (2001a, 2004, 2005) where Spec-head as a syntactic relation is eliminated leaving just in a sense *Attract* with the difference that the

corresponding new operation will not require movement. This relation is specified as Agree.

3.2.3 Agreement as a result of an operation: Agree

As previously mentioned, one of the main tenets of Minimalism is that derivations proceed to satisfy bare output conditions imposed by the *"articulatory-perceptual system A-P"* and the *"conceptual-intentional system C-I"* (Chomsky 1995). When the derivation reaches either of these interfaces, syntactic objects must have only features interpretable at that interface. For example, phonological features are not interpretable at LF; therefore they have to be stripped away from lexical items at some point during the derivational process, before the lexical items are shipped to LF. This point of the derivation is referred to as "Spell-Out." Formal features, for example, φ-features of DPs, are interpretable at LF, whereas Case is not. φ-features of T, on the other hand are not interpretable, therefore must be deleted before reaching LF. Remember in early Minimalism uninterpretable features were deleted when two items, for example, the subject and T, entered into a checking relation. This relation is established when the subject moves to [Spec, TP]. In "Derivation by Phase" (henceforth DbP) (Chomsky 2001a), Chomsky argues that all syntactic relations are deduced from one relation: Merge, a relation that comes, as he states "for free." (2005: 14).[7] He writes:

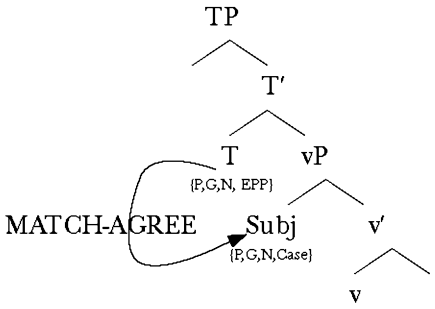
> The specifier-complement distinction loses independent significance, except in that the complement of a head H should be the only domain accessible to operations driven by H, by conditions of minimal search, the core property of c-command, but barring m-command and specifier-head relations [. .]. "complement" and "specifier" ***are just notations for First-Merge and later-Merge*** [italics H.O.]. (Chomsky 2005: 14)

If the Spec-head relation is barred as a basic relation, then Spec-head agreement is basically barred as well. The question that arises then is under what relation is agreement obtained? Chomsky argues that there are LF-uninterpretable inflectional features that enter into agreement relations with interpretable inflectional features. The φ-features of T are uninterpretable and agree with the interpretable φ-features of a

nominal element that may be "local or remote yielding the surface effect of ***noun-verb agreement***" [italics H.O.] and "the agreement relation removes the uninterpretable features from the narrow syntax, allowing derivations to converge at LF while remaining intact for the phonological component." This agreement "relation" is referred to as *Agree*. Before I elaborate on *Agree*, note that although Spec-head agreement is eliminated, agreement is still going to be defined as a structural relation by means of Agree.[8]

Agree is an operation that takes place once a relation between a "probe" (e.g. T^0) and a "goal" (e.g. an NP), is established. Both interpretable and uninterpretable formal features of these two elements (Probe-Goal) are matched. Matching is then followed by valuation and deletion of the uninterpretable features.

(25)



Notice that Agree holds between a head and an XP that it c-commands; Chomsky argues that "the complement of a head H should be the only domain accessible to operations driven by H, by conditions of minimal search, the core property of c-command."

In what follows I will list a set of formal definitions of all the hypotheses I discussed so far regarding the Probe-Goal relation and the Agree operation. Let us start with what Chomsky means by a probe and a goal.[9]

(26) **Probe**
A probe is a head bearing [-interpretable] features (e.g., v^0, T^0 bear [-interpretable] φ-features).

Presumably only functional heads, such as C^0, T^0, Neg^0, and v^0, are probes. This is not to say that lexical heads, theoretically speaking, cannot be probes.

I do not think Chomsky is clear on this, and I will leave this as an open question. Let us now define what Chomsky means by goal.

(27) **Goal**
A head bearing [+interpretable] features situated within the probe's c-command domain.

Only lexical categories from Chomsky's (2000) discussion seem to be goals. The definition in (27) subsumes that the goal only bears interpretable features, which is not the case within Chomsky's DbP system. For the goal to be accessible or "visible" to the probe two conditions have to be met: (a) the goal has to be in the probe's c-command domain, and (b) the goal has to bear an uninterpretable feature that renders it *Active*. This brings us to the definition of *Active*:

(28) **Active**
For a goal to be *active* (accessible to a probe), it must have some [-interpretable] feature of its own still unchecked. For instance, for a DP to be accessible to v^0/T^0, the Case feature of the DP must be unchecked.

When a "functional" category that bears [-*I*nterpretable] features, for example $T^{\circ}_{[\text{-I } \varphi\text{-features}]}$, is merged in the derivation, it acts as a probe, and "searches" for an "active" goal in its c-command domain, for example the subject DP which bears [+*I*nterpretable] φ-features but a [-I] Nominative Case feature. Upon establishing a Probe-Goal feature matching relation, the operation *Agree* takes place. This brings us to a formal definition of *Agree*:

(29) **Agree**
The probe P agrees with the closest matching goal in D.
a. Matching is feature identity
b. D is the sister of P. [D= c-command domain of P]
c. Locality reduces to closest c-command
(Chomsky 2000: 122)

When a feature matching relationship obtains, the unvalued features become valued. By hypothesis, these unvalued features are deleted upon *Spell Out*.

(30) **Spell Out**
By hypothesis, this operation occurs cyclically, each time a *phase* (vP or CP) is completed. Phonological material is stripped from the derivation and sent to the PF interface. Those [-I] features which have been valued under Agree are deleted.

Having defined these very crucial tools of the theoretical framework adopted in this book, I will now lay out the main proposed analysis of this work.

3.3 Unifying Agreement Relations

This book analyzes three different phenomena in Berber, namely: argument-predicate agreement, clitic doubling, and negative concord. They have previously been analyzed as different and unrelated, requiring different mechanisms such as Spec-head relations, co-indexation and licensing via c-command. The main goal is to provide evidence that despite representing a wide range of seemingly different facts, these three syntactic phenomena are in fact unifiably generated by one mechanism namely Agree, as defined in Chomsky (2000, 2001a). Subject-verb agreement involves a c-command probe-goal relation between T^0 and the subject DP; negative concord involves a c-command probe-goal relation between Neg^0 and a Negative Concord Item (NCI); and clitic doubling involves one between the clitic (CL) and the DP it doubles, as schematized in (31), (32), and (33) respectively.

(31) [T [Subj
|_____|
Agree

(32) [Neg [NCI
|_____|
Agree

(33) [CL . [DP_{obj}
|_____|
Agree

I will show that just as extraction affects subject-verb agreement yielding Anti-Agreement effects, it identically affects negation, yielding a ban on

negative concord Adverbials, and clitic doubling, yielding a ban on cliticization. I argue that these effects are not coincidental and provide, under proper analysis, further empirical evidence of unification under Agree (and elimination of construction specific accounts). Following Chomsky (2005), the "third factor" in "language design" is a set of general principles of efficient computation. Agree, to the extent that it is a computationally efficient operation, holds for any form of agreement. When this operation is inhibited, the suppression effects are uniformly displayed across all the seemingly disparate empirical domains within which it usually applies.

Consider the following example:

(34) θəʕla θmättut arba
3sf.see.PER woman boy
"The woman saw the boy"

The verb is fully inflected for subject-verb agreement. Given the DbP approach adopted here, I argue that this agreement is obtained as a result of Agree between T and the subject DP as schematized below (Note that since we have not discussed clause structure in Tamazight Berber yet (see Chapter 3) I omit a number of details not relevant to the present illustration).

(35) [TP T θəʕla . [*v*P θmättut [VP arba]]]
|——Agree——|
3sf.see.PER woman boy
"The woman saw the boy"

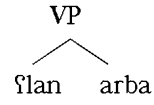
In QTB and in Berber in general, when we form a wh-question corresponding to the declarative (34), subject-verb agreement gets suppressed, resulting the so-called "Anti-Agreement Effect" first noted by Ouhalla (1993).[10]

(36) ma ag ʕla**n** arba
who Comp see.Part boy (Part: Participle)
"Who saw the boy"

Consider the step by step derivation of (36).

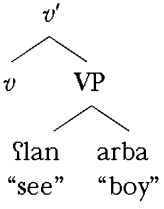
First, the verb merges with the direct object:

(37) i. {$_{VP}$ʕlan wərba}
"see" "boy"



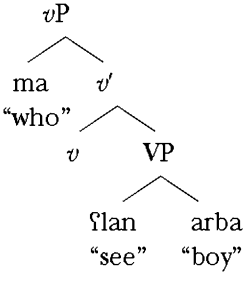
Second, little v^0 merges with the VP, forming a vP/v' object:

(38) ii. {v {$_{VP}$ ʕlan wərba}}
"see" "boy"



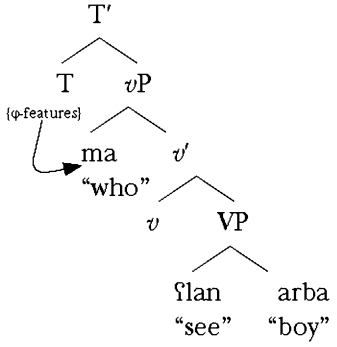
Third, the DP subject merges with the syntactic object v' to form a new syntactic object, namely vP. Note that both VP and vP are thematic domains within which the object and the subject are assigned thematic roles respectively.

(39) iii. {$_{vP}$ ma {v {$_{VP}$ ʕlan arba}}}
"who" "see" "boy"



Fourth, T^0 merges with vP. Notice that T^0 is specified for [-I] φ-features and it will probe in its c-command domain, searching for the "closest" goal with matching features. This goal is the wh-subject, which bears [+I] φ-features, [-I] Nominative Case, and [-I] Q/wh-feature

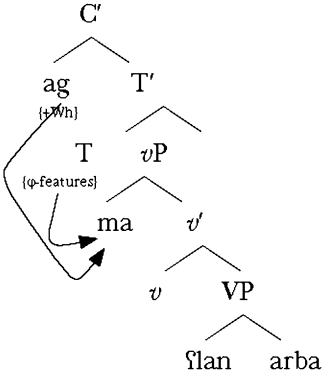
(40) iv. {$_{T'}$ T {$_{vP}$ ma {*v* {$_{VP}$ ʕlan arba}}}}
"who" "see" "boy"



Upon establishing a Probe-Goal Match relation between T^0 and [Spec- *v*P], the operation Agree takes place. The wh-feature on the wh-subject is not deleted, however; therefore the subject remains active and visible to subsequent potential probes.

Finally, C^0, which bears [+I, +V(alued)] wh-feature, is merged with the syntactic object TP:

(41) v. {C {$_{T'}$ T {$_{vP}$ ma {*v* {$_{VP}$ ʕlan arba}}}}}
"ag" "who" "see" "boy"



Note that examples such as these (i.e. (36)) are where subject-verb agreement is suppressed, yielding AAE. The question arises as to why this is the case, since T can establish a Probe-Goal relation, hence agree with the subject prior to the latter's extraction to [Spec, CP].

I adopt Chomsky's (2004, 2005, 2006) hypothesis that T inherits its φ-features from C as stated in this quote:[11]

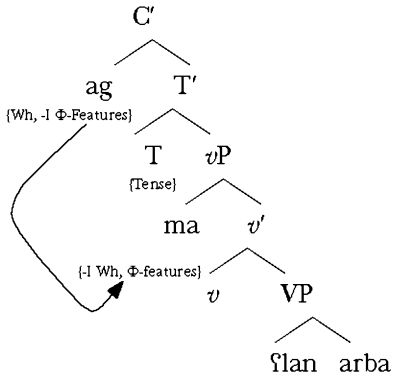
> T functions in the Case-agreement system only if it is selected by C, in which case, it is also complete. Further, in just this case T has the semantic properties of true Tense. These cannot be added by the Ø-features, which are uninterpretable; they must therefore be added by C. Hence T enters into feature-checking only in the C-T configuration. (Chomsky 2004: 13)

The hypothesis that φ-incomplete T (i.e. a non-finite T) is not selected by C seems to be logically right. Since C is the head that originally bears φ-features, T will never receive these features if C is never merged. However, the hypothesis that if C is merged, it transfers its φ-features to T, and we get a φ-complete T, seems to be a mere stipulation. If C is what bears the φ-features, we should expect the following three logical possibilities:

(42) **C-to-T Φ-Features Transfer**
- a. C transfers its φ-features to T and does not keep a copy of these features.
- b. C does not transfer its φ-features to T at all.
- c. C transfers its φ-features to T and keeps a copy.

Chapter 5 provides detailed discussion and empirical evidence for all these possibilities. In the meantime let us return to example (36); the not-extracted wh-subject serves as the Goal for two different Probes T and C. According to Chomsky, T inherits its φ-features form C. T then should probe the subject and subject-verb agreement or T-agreement should obtain. Notice that C, after handing off its φ-features to T in Chomsky's approach, only has a wh-feature which is valued and interpretable, therefore C now is not active and cannot act as a probe. The wh-subject gets its Case valued and deleted. The only feature that makes the subject remain active is the unvalued uninterpretable wh-feature. Without an active C probe, this feature will not get valued and deleted and the derivation faces a fatal crash. I propose then that upon the failure of option (a) above, option (b) is "used," that is, C does not transfer its φ-features to T.

(43)



Now C bears [-I] φ-features and is therefore active. It probes the wh-subject and values its Case feature and in return it gets its own φ-features "checked," and since C also bears a wh-feature it checks the uninterpretable wh-feature of the subject and the derivation converges. In cases such as (36) repeated in (44) below T never receives the φ-features from C, given option (b), and therefore we never obtain T-agreement, hence yielding the so-called the Anti-Agreement Effect. We do however obtain C-agreement which is marked by an obligatory complementizer.

(44) ma-**ag** ʕlan arba
who-**Comp** 3sf.see.**Part** boy (Part: Participle)
"Who saw the boy"

This analysis and the different empirical evidence that support it are detailed in Chapter 5.

I extend the same analysis to negative concord which, I argue, is a form of agreement. If Chomsky's C-to-T φ-feature transfer hypothesis is on the right track, it raises a question about what happens in negative sentences. Assuming the clause structure used in this work, C selects Neg and Neg selects T and given Zanuttini (1996) who argues Neg selects T universally, and Holmberg (2003) and Haegeman (1995) who assume the same hypothesis, the big question is how does C transfer its φ-features to T in a structure such as (45)?

(45) $[_{CP}$ C $[_{NegP}$ Neg $[_{TP}$ T]]]

I propose that C transfers its φ-features to T via Neg as expressed below:

(46) **C-to-Neg-to-T φ-Feature Transfer**
C transfers its φ-features to T via Neg.

As pointed out by Ouhalla (p.c.), and other researchers, the verb in Berber shows a negative form in negative sentences. A form that descriptive grammarians refer to as the irrealis form as shown in example (47) vs. (48):

(47) idd**a** ʕli
leave.2sm.PER Ali
"Ali left"

(48) ur iddi ʕli
Neg leave.3sm.IRR Ali
"Ali didn't leave"

In Chapter 8 I will argue that the negative morphology on the verb in negative sentences is a reflex of the feature transfer from C-to-Neg-to-T.

In the same chapter I will also analyze negative concord. Examples such as (49) are not grammatical in QTB because only one NCI is allowed.

(49) ur iddi (*sha) agidʒ
Neg leave.PER.3s (*neg) nobody
"Nobody left"

I argue that Neg agrees with (hence licenses) the NCI (its goal). In (49) Neg has two potential goals which yields a locality violation expressed by the Probe-Goal Locality Condition in (50):

(50) **PGLC**
A probe X cannot probe ZP over an intervening active Y or active YP that bears the same uninterpretable features as X.

To salvage the problem the intermediate goal is suppressed as schematized in (51) and represented in (52)

(51) $\mathbf{X}_{\{\alpha\}}$ $\mathbf{*YP}_{\{\alpha\}}$ $\mathbf{ZP}_{\{\alpha\}}$

(52) *[Neg ur [TP T[Agr] iddi [*v*P ~~sbd~~ [vP agidʒ ~~iddi~~.]]]]]

Another phenomenon the analysis extends to is clitic doubling, as will be discussed in detail in Chapters 5 and 6. Indirect objects in Berber can be optionally doubled as shown in (53).

(53) da-(**as**) wshəx i-**məryəm** ləcθab
will –(her) give.IMP.1s to-Miriam book
"I will give (her) the book to Miriam"

Clitic and the doubled DP must agree in Case and φ-features.

(54) *da-**as** wshəx i-**waraw** lḥəlwa
will –(her) give.IMP.1s to-boys candy
"I will give the boys candy"

There have been different proposals as to the structural position of object clitics. Researchers such as Belletti (1993), Uriagereka (1995), and Kayne (2003) (for Romance languages) argue that clitics are D heads. Others such as Sportiche (1992) and (1998), Manzini (1998), and Manzini and Savoia (1999, 2001, 2002) (for Romance) argue that clitics are clitic-heads or Agro heads, as proposed by Progovac 2005 among others (for Slavic). All things being equal, I will argue in detail in Chapter 6, that Berber facts favor the Clitic/Agro heads approach (see Ouali 2005). How is the agreement between the clitic and the double DP obtained? I argue that, just like subject-verb agreement, and negative concord, it is obtained via Agree as represented in (55).

(55) [TP da- [CLP **as** wʃəx [vP i- **məryəm** ləcθab
will –(her) give.IMP.1s to-Miriam book
"I gave the book to Miriam"

This predicts that A-bar extraction of the object DP should affect clitic doubling and cause a PGLC violation since there will be a higher Probe (presumably C) competing with the clitic for the doubled DP object as schematized in (56).

(56) $C_{\{wh/topic..\}}$ $*CL_{\{wh/topic..\}}$ $Obj_{\{wh/topic..\}}$

This prediction is borne out. Object extraction as predicted affects the clitic-head as illustrated in (57).

(57) Məryəm ami wʃix-(*as) ləcθab
Miriam Comp give.PER.1s-(*her) book
"It was to Miriam that I gave the book"

Certain argument extraction inhibits agreement. Subject extraction yields AAE, Object extraction yields a ban on "agreeing" clitic doubling, and NCI extraction yields a ban on the appearance of the "agreeing" negative concord element Neg2. This provides compelling further evidence of unification under Agree.

Before addressing Agreement and Anti-Agreement Effects we will first discuss some grammatical properties and the clause structure of Tamazight in the following chapter.

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Chapter 4

Tamazight Verb Morphology and Clause Structure

Before embarking on an analysis of the agreement in QTB, it is important to: (a) highlight some aspects of its grammar, (b) discuss the properties of its verb morphology, tense and aspect, negation, and complementizers, and (c) determine certain aspects of clause structure in this language. Much work on other Berber languages and other Tamazight dialects from the Generative perspective has been done (see Ouhalla 1988, 1989, 1991, 2005a, 2005b and Elouazizi 2004, 2005 for Tarifit, Abdel-Massih 1971, Guerssel and Hale (eds.) 1987, 1995, and Boukhris 1998 for Tamazight). Building on this work, I will discuss the most important aspects of the clause structure of Tamazight Berber. I will start with word order and discuss the types of orders the language allows and the possible analyses proposed for the derivation of these word orders especially the placement of the verb, and then I will discuss Aspect and Tense in this language. Next, I will discuss the agreement system and the structural positions of tense, aspect, negation, and complementizers in Tamazight.

4.1 Word Order

The word order in Tamazight Berber, like its sister varieties, tends to be verb initial (VSO order) as illustrated in (1). The noun subject in such clauses must be in the so-called "Construct state." This language also exhibits an SVO order as in (2) where the noun must be in the "Free state."

(1) yuɣ wərba acsum
3s.bought.PER boy meat
"Moha bought meat."

(2) arba yuri θabrat
boy 3s.wrotePER letter
"Moha wrote the letter."

The Construct form in masculine nouns is marked by the prefix *w-* and a reduced vowel [ə] in Tamazight as shown in (1), whereas the Free form is an unmarked form and the noun has no prefix and starts with a full vowel as illustrated in (2). In feminine nouns, the unmarked forms start mostly with the feminine marker *th- [θ]* and a full vowel, for example ***th***arbat [θartbat] "girl." The Construct form is marked by a reducing the initial vowel as in ***th***ərbat [θərtbat] "girl."[1]

There is almost a general consensus that VSO is a derived by displacing the verb to a pre-subject position (See Boukhris 1998, Elouazizi 2003, 2005, Guerssel 1995, Omari 2001, Ouhalla 1988, 2005a, 2005b among others). The position where the verb moves however varies from one an analysis to another. For Ouahalla (1988), Sadiqi (1986), and Ouali (2006a, 2006b) the verb moves to T, for Elouazizi (2005) it moves to a position F higher than VP but lower than T, and for Ouhalla (2005a) it simply moves to *v* within *v*P but never to T. In constructing his arguments, Elouazizi (2005) uses the following presentations of the possible derivations of verb movement in "Berber":

(3) a. $[_{CP}$ C $[_{TP}$ T $[_{VP}$ V]]]
b. $[_{CP}$ C $[_{TP}$ T+V $[_{VP}$ t_V]]]
c. $[_{CP}$ C+V $[_{TP}$ T $[_{VP}$ t_V]]]
d. $[_{CP}$ C $[_{TP}$ T [FP F+V $[_{VP}$ t_V]]]] (Elouazizi 2005: 4)

Using empirical evidence from Tarifit Berber, Elouazizi argues for option ((3)-d) as the representation of verb movement in Berber. Consider these facts from Tarifit:

(4) i-wʃa Muħand lktab i w-arba
3M.S-give.PER Muhand.SUB book.OBJ to CS-boy
"Muhand gave the book to the boy."

(5) Muħand i-wʃa lktab i w-arba
Muhand.SUB 3M.S-give.PER book.OBJ to CS-boy
"Muhand gave the book to the boy."

(6) i-wʃa s t id Muħand
3M.S-give.PER $CL_{DAT.3SM/F}$ $CL_{ACC.3SM/F}$ CL_{DIR} Muħand.SUB
"Muħand gave it to him /her here."
(Tarifit Berber, Elouazizi 2005: 4)

Elouazizi rightly argues that examples such as (4) with a verb preceding the subject point to the verb being outside the VP domain especially considering the widely accepted VP-internal subject hypothesis (Koopman and Sportiche 1991). This renders option (a) as a possible derivation where the verb is in-situ in Berber basically invalid. Another piece of evidence in favor of this analysis is the placement of VP manner adverbials as in example (7):

(7) moħa yuri ðəɣya θabrat
Moha 3s.wrotePER quickly letter
"Moha wrote the letter quickly."

Given the standard assumption that such adverbials are adjoined to VP, one can conclude that the verb and the subject in (7) have undergone movement.

If the verb is displaced out of VP, the question is what position does it exactly occupy? According to Elouazizi (2005), it cannot be T because as shown by the example in (8) from Tamazight Berber and the example in (9) from Tarifit Berber, we find that overt tense elements can be separated from the verb by different types of clitics:

(8) lla as t tini-n immidn (Tamazight)
TPRES- CL_{DAT} 3S.M/F CL_{ACC}.3S.M/F say-3PL people
"People say/repeat it to him (all the time)."
(Boukhris 1998: 382)

(9) að as t id xf-s i-wʃ w-arba
F/M CL_{DAT}.3SM/F CL_{ACC}.3SM/F CL_{DIR} CL_{PP}/ON IT 3M.S-give.AOR CS-boy
"The boy will give it to him/her on it." (Tarifit, from Elouazizi 2005: 5)

Following Ouhalla (2005b), Elouazizi (2005) then concludes that the position where the verb resides cannot be T and therefore eliminates option (b) as a possible derivation. However, these facts do not seem as decisive as Elouazizi (2005) might suggest. Having an overt T and a set of clitics

preceding the verb does suggest that the verb is not in T, yet it does entail that it never moves there if there are no overt tense elements in the sentence.

In Tamazight as well as in Tarifit, for that matter, the verb in the perfective form denoting past tense can precede clitic elements as in (6). One can still maintain option (b) and argue that the verb moves to T when the T is not occupied by any tense elements which explains the clitic distribution in (6), (8), and (9). In Chapter 5, I develop more arguments for this analysis and show that both options (b) and (c) are possible derivations in Tamazight. As far as V-to-C (option C) is concerned, this analysis was proposed for the so-called verb-second languages such as Scandinavian languages, German, and Dutch (Vikner 1995, Holmberg and Platzack 1995 among others).[2] QTB does not exhibit clear verb-second effects. In Ouali (2003), I attempted to show that the verb still moves to C in Tamazight under certain circumstances, an analysis that I have since abandoned in favor of the V-to-T analysis detailed in Chapter 6. I will then follow Elouazizi's conclusion that there is no strong evidence for option (d) as a possible derivation for verb movement in Tamazight.

Tamazight allows OVS order only if a resumptive pronoun co-occurs in the same clause. These are cases where the object is topicalized and presumably occupies the highest Spec position in the structure, that is, [Spec, CP].

(10) aħʃlaf ykku-θ ʕli
GRASS 3s.cut.PER-it Ali
"The grass that Ali cut."

OSV and SOV are not possible orders in this language.

(11) * aħʃlaf ʕli ykku
grass Ali 3s.cut.PER

(12) *ʕli aħʃlaf ykku
Ali grass 3s.cut.PER

I will revisit this issue in more detail with regard to verb movement in Chapter 6.

The order of full NP direct objects and indirect objects is not restricted in Tamazight. That is, the DO can precede the IO or vice versa, as shown below:

(13) wʃix lkənaaʃ i-Fatima
gave.1s.PRF note-book to Fatima
"I gave the notebook to Fatima"

(14) wʃix i-Fatima lkənaaʃ
gave.1s.PRF to Fatima note-book

In this language, the DO and the IO but not the subject can be realized as clitics:

(15) wʃix **-as** lkənaaʃ
gave.1s.PRF -her note-book
"I gave her the note-book"

(16) wʃix **-t** i-Fatima
gave.1s.PRF -it to-Fatima
"I gave it to Fatima"

Since Ouhalla's (1988) seminal work, clitics in general and the object pronominal clitics in particular have occupied the central stage in Berber syntax literature especially from the Generative perspective (See Boukhris 1998, Elouazizi 2003, 2005, Guerssel 1995, Ouali 2006a, 2006b, Ouhalla 1988, 1993, 2005a, 2005b among others). There are two main reasons for this: the first reason is that clitics have a very interesting distribution in Berber, and the second reason is that clitic placement has important implications about the clause structure and the placement of, for example, the verb in Berber. Chapter 6 deals with this topic in more detail.

4.2 Aspect and Tense

4.2.1 Verbal aspectual forms

Early traditional studies on Berber especially by prominent French Berberologists such as Laoust, Basset, Penchoen, and subsequent researchers have divided the basic verbal forms in Berber to four: (a) "L'oariste,"

(b) "L'aoriste intensive," (c) "le prétérite," and (d) "le prétérite negative." In the Anglophone syntax literature these forms, as reported in Guerssel and Hale (eds.) (1987), and described in Ouhalla (1988, 1989), are aspectual and correspond to the following forms: (a) aorist, (b) imperfective, (c) perfective, and (d) irrealis. I will argue that these aspectual forms alone do not convey tense. Tense is expressed by tense heads that are overt in the case of present and future and null in the case of past, and there are selectional restrictions between tense and aspect as I will discuss in detail. First, the following paradigm illustrates the different aspectual verb forms:

(17)	Aorist	Imperfective	Perfective	Irrealis *(Negative Perfective)*	
	af	taf	uf	ufi	"find"
	ar	tar	uri	uri	"write"
	ɣrf	ɣərf	ɣrf	ɣrif	"bake"

Aspect is usually used to denote events, actions, or states in terms of duration and repetitiveness. Comrie (1976) defines aspect as consisting of "different ways of viewing the internal temporal constituency of a situation" (Comrie 1976: 3) as quoted in Brustad (2000: 165). Comrie distinguishes among three crosslinguistic aspectual forms: perfective, imperfective, and perfect. Out of these three categories, the perfective and the imperfective map onto the Berber aspectual system neatly with the Berber irrealis form simply being a negative perfective. The aorist form however, does not have any tense, aspectual, or modal value. The following example is provided to illustrate how this form is deficient in that it does not encode aspectual or temporal information and cannot occur by itself in a root indicative clause.

(18)	*dux	ɣər-rbað	askka
	Go.AOR.1s	to-Rabat	tomorrow
	"*I to go to Rabat tomorrow"		

The aorist form, as pointed out in Boukhris (1998: 63), is not used in the same sense as in languages such as Greek where the aorist is a grammatical category referring to past. Rather, it is a "neutral" form that acquires different tense values depending on the context. For this reason scholars such as Aspinion (1953), Basset (1952), Ouhalla (1988), Penchoen (1973), and

Reesink (1979), treat the aorist as the default form which the other forms are derived from akin to the infinitival form in French, for example. However, other researchers such as Boukhris (1998), Makhad (2004), and Omari (2001) have argued against treating the aorist form as the base form.

There are two contexts where this form is found in Tamazight: (a) with the future morpheme *daδ* as shown in (19), (b) with the particle *aδ* when the verb is in an embedded clause as illustrated in (20).

(19) daδ dux ɣər-rbaδ askka
Fut Go.AOR.1s to-Rabat tomorrow
"I will go to Rabat tomorrow"

(20) rix aδ dux ɣər-rbaδ askka
want.PER.1s to Go.AOR.1s to-Rabat tomorrow
"I want to go to Rabat tomorrow"

4.2.2 Tense markers

We find three types of tense markers in Tamazight namely the future particle *daδ*, the non-finite marker *aδ* and the progressive/habitual particle *la*. The particle *daδ* is the only clear tense marker that we can find in Tamazight and which denotes future tense. It appears only with verbs in the *aorist* form.

(21) daδ dux ɣər-rbaδ askka
will go.AOR.1s to-Rabat tomorrow
"I will go to Rabat tomorrow"

A number of scholars have argued that *daδ* consists of the two morphemes: *d* and *aδ*. The second morpheme (*aδ*) is arguably the same element used in non-finite contexts. Boukhris (1998), for example, conflates the two elements as one namely: *ad*, and describes its different properties as follows:[3]

a. *ad* must co-occur with a verb in the aorist form:

(22) ad i- ddu. (Boukhris 1998: 94)
Fut 3m.sg-leave.AOR
"He will leave"

(23) *ad i- dda.
Fut 3m.sg-leave.PER
"*He will left"

b. *ad* can occur with the verb in the irrealis (negative perfective) or what is referred to in the Francophone literature as "l'Aorist Intensif." However, she states that this is less frequent in the Zemmour dialect described in her work.

(24) ad i- ddu. (Boukhris 1998: 94)
Fut 3m.sg-leave.AOR
"He will leave"

I find examples with *að* and without *d* to be ungrammatical in the dialect described here.

(25) *að i- ddu.
Fut 3m.sg-leave.AOR
"He will leave"

c. Boukhris (1998) states that *að* can be preceded by the morpheme *d* which she claims is a focus marker. The form *d-ad*, according to her, is the "emphatic" counterpart of *ad*:

(26) d-ad i- ddu. (Boukhris 1998: 95)
Fut 3m.sg-leave.AOR
"He will certainly leave"

I find this characterization of the morpheme *d* in Boukhris (1998) to be highly implausible. There are a number of reasons to suspect that the word *dad* in Boukhris's dialect consists of one morpheme and not of two separate morphemes namely: *d* and *ad* as she claims. The first reason has to do with the distribution "*d-ad*" in the other Zemmour dialects. Take for example the Quebliyeen dialect described in this work and consider examples where *d* is left out and *að* is used as a future marker in a root clause. As pointed out above, such examples are ungrammatical as shown in (25). The second reason is: if *d* is a focus marker, as Boukhris (1998)

claims, then why doesn't it occur with verbs in the Perfective form in sentences denoting past tense or with verbs in the Imperfective form in sentences denoting present tense? Examples (27) and (28) show that *d* cannot be used as a focus marker in sentences in the past tense and the present tense.

(27) *d- y- dda
Fut 3sm.leave.PER
"He certainly left"

(28) *d-la y- təddu.
Fut 3sm.leave.IMP
"He is certainly leaving"

A third piece of evidence in favor of *dað* being a monomorphemic word comes from other dialects such as Tashelhit where future tense is marked by the word *rad* (Omari 2001 and Makhad 2004) as illustrated below:

(29) rad ɣr –h ləcθæb (Omari 2001: 22)
Fut read.AOR.1s the-book
"I will read the book"

d. The next property that Boukhris describes is that *ad* can be preceded by negation but *d*, she claims, must be used:

(30) ur *d*- ad i- iddu (Boukhris 1998: 95)
Neg Af-Fut 3m.sg-leave+AOR [Af: Affirmative]
"He will not leave"

In this example Boukhris describes *d* as an "Affirmation" marker, which begs the question why would such marker occur in negative sentences. Boukhris herself declares that the obligatoriness of *d* in negative sentences is unexpected but it is not an isolated case since it is also found in yes-no questions following the Q(-uestion) marker "*is*":

(31) is *d*- ad i- ffR (Boukhris 1998: 95)
Q foc-Fut 3m.sg-exit+AOR [foc: Focus]
"will he leave"

The first remark about Boukhris's example is the inconsistency in the characterization the *d* marker. In (30) *d* is characterized as an "affirmation" marker and in (31) it is glossed as a focus marker. The second issue is that the fact that *d* and *ad* coexist in declarative sentences regardless of whether they are affirmative or negative. The yes-no questions are just another piece of evidence that *d-ad* should be treated as a monomorphemic word which marks future tense. Therefore, I make a distinction in Tamazight between the future tense marker *dað* and the particle *að* found in embedded clauses.

Like the future tense morpheme *dað, að* precedes only *aorist* verb forms. The characterization of this morpheme in the Berber syntax literature is not uniform either. Ouhalla (1988) notes that *að*-clauses, in Tarifit, correspond to infinitival clauses in English and other languages. The function of *að* is then akin to the function of *to* in English to-infinitives. Ouhalla argues, based on the fact that "purposive" and control clauses in Berber are invariably *ad*-clauses, that the aorist form can be treated as a sort of inflected infinitival of the type reported for European Portuguese (Raposo 1987). (32) is an illustrative example of treating *að* at an infinitive marker:

(32) rix að-ruħəx
want.PER.1s to-go.AOR.1s
"I want to go"

Other researchers however treat *að* as a complementizer. Boukhris (1998) for Tamazight glosses *ad* when used with embedded verbs as "que" which is the French term for "that" as indicated in the gloss of the following example (33):

(33) i- ra ad i-ðiddu. (Boukhris 1998: 98)
3m.sg-vouloir+Pr "que"/that 3m.sg-go.AOR
"he wants to go"

In dialects such as Tashelhit *ad* is also treated as a complementizer by, for example Omari (2001), as shown in (34), and Makhad (2004) as illustrated in (35):

(34) ur ufi -ħ ad aqra -ħ ɣiyyd (Omari 2001: 24)
Neg able+PER-I that studying-I the-night
"I cannot study during the night"

(35) ri-ɣ ad i-gʷn urgaz (Makhad 2004: 202)
want.PER.I that he-sleep the man
"I want the man to sleep"

Regardless of the different treatment of *ad* in the literature, its distribution across dialects with embedded verbs is uniform. It only occurs with *want*-type (*ira*) verbs preceding an embedded verb which must be in the Aorist form as in (36). Also, it is different from the complementizer *bəlli* which occurs after verbs like *inna* "*say*" as in (37).

(36) rix að-ruħəx
want.PER.1s to-go.AOR.1s
"I want to go"

(37) inna ʕli bəlli Fatima da t-ruħ
3sm.say.PER ali that Fatima Fut 3sf.go.Aor
"Ali said that Fatima will go"

The tense interpretation of the embedded clause is dependent on the matrix tense. *Want*-type verbs have been described in the generative literature as Exceptional Case Markers (ECM) in that they assign Accusative Case to the embedded subject. This property is also found in Tamazight as shown in (38) where the embedded pronominal subject is an accusative clitic. Replacing the accusative clitic with a full nominative pronoun results in ungrammaticality as shown in (39):

(38) rix- c at-truħəθ [at-truħəθ = að-truħəθ]
want.PER.1s CL_{ACC} to-go.AOR.2s [CL_{ACC} = Accusative Clitic]
"I want you to go"

(39) *rix ciyən at-truħəϴ
want.PER.1s you to-go.AOR.2s
"I want you to go"

This property makes *að* appear like an infinitival marker except of course the verb is inflected for agreement.

The particle *la* is a progressive present tense and a habitual present tense marker in Tamazight. It is followed by a verb in the imperfective form when denoting present tense:

(40) la-tətx aɣrum
la-eat.1s.IMP bread
"I am eating bread (now)" or "I eat bread (everyday)"

Leaving out the morpheme *la* in clauses with verbs in the imperfective form result in ungrammaticality as illustrated in (41):

(41) *tətx aɣrum
eat.1s.IMP bread
"I eat/am eating bread"

As pointed out by Boukhris (1998) the morpheme *la* can also be used with verbs in the Perfective form which denote past tense as shown in (42) and (43):

(42) itʃa ʕli aɣrum
3sm.eat.PER ali bread
"Ali ate bread"

(43) la itʃa ʕli aɣrum[4]
la 3sm.eat.PER ali bread
"Ali ate bread"

The two questions that Boukhris (1998) rightly raises are: (a) are we dealing with the same morpheme that occurs with both the Imperfective verb form and the Perfective verb form in both the present tense context and the past tense context respectively? Or (b) is the *la* morpheme that we see with the Perfective form a completely different particle from the one we see with the Imperfective form. Boukhris (1998) argues for the second option and analyzes the two forms of *la* as two different (homophonous) morphemes. The first one is strictly used to denote present tense with the Imperfective verb as in (40) provided earlier. The second

has a modality function and is used to denote "affirmative" mood. Boukhris (1998) provides convincing arguments and empirical evidence for this analysis and I will review them next after we examine the following examples:

(44) la itəddu[5] ʕli
Pres 3sm.leave.IMP ali
"Ali indeed is leaving"

(45) ur la itəddu ʕli
Neg Pres 3sm.leave.IMP ali
"Ali is not leaving"

(46) *la ur itəddu ʕli
Pres Neg 3sm.leave.IMP ali
"Ali is not leaving"

(47) la ur la itəddu ʕli
Af Neg Pres 3sm.leave.IMP ali
"Ali is indeed not leaving"

(48) la idda ʕli
Af 3sm.leave.PER ali
"Ali indeed left"

(49) la ur iddi ʕli
Af Neg 3sm.leave.PER ali
"Ali didn't in fact leave"

(50) *ur la iddi ʕli
Af 3sm.leave.PER ali
"Ali is not leaving" (adapted from Boukhris 1998: 90–91)

In the example (44) *la* occurs with an Imperfective verb. Like other tense particle such as the future tense marker *daδ* in (51), *la* must be preceded by negation in negative sentences as shown in (45) and (46).

(51) ur *daδ* i.ddu ʕli
Neg Pres 3sm.leave.IMP ali
"Ali will not leave"

This indicates that *la* which occurs with Imperfective verb forms is a tense marker and not an "affirmative" model. Another piece of evidence comes from examples such as (47) above where both the model *la* and the tense marker *la* co-occur in the same clause; a fact that is expected and which is indeed borne out. Examples (48), (49), and (50) further confirm this by showing that given the fact that negation in Tamazight must have scope over tense elements, the *la* that occurs with the Perfective form must be the model form since it must precede negation as shown by examples (49) and (50). I will, therefore, adopt Boukhris (1998) approach in treating the behavior of *la* as reflecting two separate morphemes. Unlike Boukhris (1998) however, I will treat *la* that precedes Imperfective verbs as a present tense marker. In the next section I will return to the interaction of the different tense markers and the aspectual verb forms in Tamazight.

4.2.3 Tense and Aspect interaction

Turning back to the aspectual morphology on the verb, the aorist aspectual form, as pointed out above, occurs typically in sentences containing the future tense marker *daδ* or the particle *aδ* (in embedded clauses). The aorist form is combined with the future marker *daδ* to give us the future tense interpretation (52), and is combined with the particle *aδ* to give us unrealized future tense interpretation (53).

(52) daδ aɣəx aɣrum
will buy.AOR.1s bread
"I will buy bread"

(53) rix aδ- aɣəx aɣrum
want.1s to-buy.AOR.1s bread
"I want to buy bread"

The perfective form usually conveys the simple past as shown in (54) and it does not co-occur with any phonologically overt tense markers. Unlike Ouhalla (1988, and subsequent works), Guerssel (1992) and a number of other Berber linguists, I assume following Ouali and Pires (2005) that there is a past tense particle that is a phonologically null element (Ø).

(54) Ø yuri θabrat
Past 3ms.write.PER letter
"He wrote the letter"

The imperfective combined with the present tense marker *la* conveys simple or progressive present tense (55).

(55) la- y-tari θibraθin
Pres 3ms-write.IMP letters
"He writes/is writing letters"

The irrealis form on the other hand occurs typically in negative past clauses. Like the perfective, the irrealis does not co-occur with a phonologically overt tense particle and here again I assume it is a null particle. The tense interpretation that results from combining this Ø particle, the irrealis form and negation is a negative past.

(56) ur Ø uffix θabrat.
Neg Past find.1s.IRR letter
"I didn't find the letter"

(57) ur Ø θəddi ɣər lmaħal
Neg Past 3fs.go.IRR to house
"She didn't go home"

To get a negative present we need to use the particle *la* and the imperfective verb form (58) and for a negative future we use the future particle *dað* and the aorist verb form (59).

(58) ur la-taɣəx aɣrum
not-buy.1s.IMP bread
"I'm not buying bread" or "I don't buy bread"

(59) ur dað aɣəx aɣrum
not will buy.AOR.1s bread
"I will not buy bread"

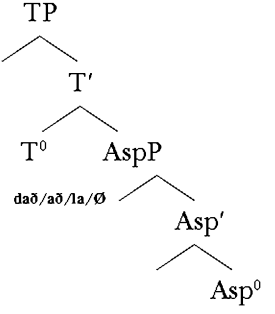
In what follows I summarize the basic facts about the tense aspect system in QTB:

(60) Tense aspect System in QTB

	Tense Auxiliaries			
Verbal Aspectual Forms	la	dað	að	Ø
Perfective	*	*	*	Simple Past Tense
Imperfective	Progressive or Habitual Present	*	*	*
Aorist	*	Future tense	Future (Non-finite) tense	*
Irrealis	*	*	*	Negative Past

Morphologically, Aspect in Tamazight Berber is expressed through a vocalic alternation in the consonantal root. Syntactically, it has been assumed since Ouhalla (1988) that Tense (T) and Aspect (Asp) correspond to different projections in the syntactic structure of Berber as shown in (61). I adopt this structure as background and argue following Ouali and Pires (2005) and contra Ouhalla (1988) and Boukhris (1998) that *la* is not an aspect marker but a tense marker occupying T^0 similar to the future marker *da* and the non-finite marker *að*. To complete the paradigm I argue, here again following Ouali and Pires (2005), that past tense is morphologically marked by a null morpheme which also occupies T^0 and selects a perfective aspectual verb form. In sum, I argue that Berber has a complete paradigm of tense morphemes that occupy a syntactic projection different from the "aspectual" verb forms.

(61)



4.3 Complex Tense

To express complex tenses, such as the future imperfective in (62), I argue, contra Ouhalla (1988), and following Ouali and Pires (2005) that the clause structure of these clauses involves two Tense Phrases (TP).

(62) daδ ilin la təddun aδay nawəδ
Fut Be-AOR.3p Pres go-IMP.3p when arrive.1p
"They will be leaving when we arrive"

In his arguments for the separation of TP and Aspect projections (AspP) in Berber, Ouhalla (1988) proposes to extend his analysis to clauses with the inflected auxiliary verb *ila* "be," such as (62). This auxiliary can be used with the main verb in sentences which involve "temporal contrastiveness" or "antecedence," in Ouhalla's (1988) terms. Ouhalla argues that the fact that *ila* inflects for agreement, is marked for aspect, and can function as a main verb implies that *ila* is a verb and not just an "aspect/mood marker." He therefore assumes that the structure of clauses such as (63) contains two Agr projections and two Asp projections, but only one TP; otherwise, we would not be able to account for the contrast between (63) represented in (64), and (65), in which two tense markers (*ad*) co-occur.

(63) ad-illi-n uggurn rux-nni (Tarifit Berber)
to-Aux-AOR-3p go-PER-3p time-that Aux (Ouhalla) = BE

(64) $[_{TP}$ ad $[_{AspP}$ illin$_i$ $[_{VP}$ t$_i$ $[_{AspP}$ uggurn$_j$ $[_{VP}$ t$_j$.]]]]]

(65) *ad-illi-n ad-uggur-n rux-nni (Tarifit Berber)
to- Aux-AOR-3p to- go-PER-3p time-that (from Ouhalla 1988: 47)

However, given examples such as (62) from Tamazight, I argue that complex tenses in Berber involve not only two AspPs (since both BE and the main verb are inflected for Aspect), but also two separate TP projections, as shown by the presence of two separate overt tense auxiliaries, one preceding BE and the other preceding the main verb, as in (66).

(66) [TP daδ [AspP illin$_i$ [VP t$_i$ [TP la [AspP təddun$_j$ [*v*P t$_j$ [VP t$_j$]]]]]]]
Fut BE-AOR.3p Pres go-IMP.3p
"They will be leaving"

The interpretation of the second tense head is dependent on the matrix tense, which is deictic. I assume that the ungrammaticality of the Tarifit example in (65) is not due to the presence of a second T head in the embedded domain but to selectional restrictions. The non-finite auxiliary *ad* does not select a verb in the perfective aspectual form.

To summarize, complex tense in Berber is expressed by using both a tense affix and the copula BE together with another tense affix and the main verb. The examples (67) through (72) show the different complex tenses that are generated with two different specifications for matrix tense, combined with the required aspectual form of the copula BE and with the embedded TP:

(67) daδ ilin la təddun aδay nawəδ
Fut BE-AOR.3p Pres go-IMP.3p when arrive.1p
"They will be leaving when we arrive" ***Future Progressive***

(68) daδ illin Ø dan wasa
Fut BE-AOR.3p Past leave-PER.3p now
"They will have left now/by now" ***Future Perfective***

(69) daδ ilin daδ ddun
Fut BE-AOR.3p Fut leave-AOR.3p
"They will be about to leave ***Future in the future***

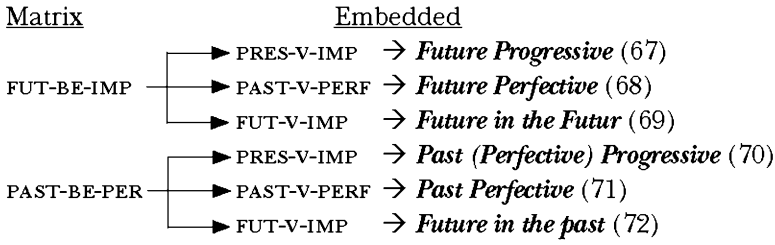
(70) lan la təddun
Past-BE-PER.3p Pres leave-IMP.3p
"They were leaving/had been leaving " ***Past Progressive***

(71) llan ddan
Past-BE-PER.3p Past-leave-PER.3p
"They had left" ***Past Perfective***

(72) llan daδ ddun
Past-BE-PER.3p Fut leave-AOR.3p
"They were about to leave" ***Future in the Past***

In sum, this analysis, proposed in Ouali and Pires (2005) provides a precise account of how the different complex tenses are syntactically generated in Berber. The Matrix tense can either be Future or Past and cannot be Present. The following summarizes the templates of complex tense:

(73) Templates of Future and Past complex tenses:



Having argued that complex tense sentences are bi-clausal I will next discuss what sets them apart from other biclausal sentences like ECM constructions.

4.4 Be vs. Want Type Verbs

ECM constructions (Want-type clauses) license two different subjects as shown in (74).

(74) daδ iri ʕli ad təddu Fatima
Fut want.AOR.3sm Ali to go-AOR.2sf Fatima
"Ali will want Fatima to leave"

The copula *ila* in BE clauses on the other hand, can only license one subject (75) vs. (76).

(75) illa ʕli da δiddu
BE.PER.3sm Ali FUT go.AOR.2sm
"Ali was going to leave"

(76) *illa ʕli da teddu Fatima
BE-PER.3sm Ali FUT go.AOR.2sf Fatima

We argue that want-type verbs, assign/value Case of the embedded subject as shown by *clitic climbing* in (77) where the subject of the embedded clause is assigned Accusative Case and is attached to the matrix auxiliary.

(77) da-t iri ʕli ad təddu
Fut-her Want-PER.3sm Ali to go.AOR.2sf
"Ali will want her to go"

The copula *ila* cannot assign Accusative Case to the embedded subject as in (78).

(78) illa **nta/*as** dað iddu
Past BE-PER.3sm **he/*him** FUT go.AOR.2sm
"He was going to leave"

We argue that the structure of BE clauses, as represented in (79), involves a *v*P in the embedded domain (predication domain of the main verb), and a VP in the matrix domain (the auxiliary domain which does not project an independent external argument).

(79) [TP da [AspP illin [VP ~~illin~~ [TP la [AspP təddun [*v*P ~~təddun~~ [VP ~~təddun~~]]]]]]]
Fut BE-AOR.3p ~~BE~~ PRES go.IMP.3p ~~go~~ ~~go~~
"They will be going"

The question that arises now is if both T heads in BE clauses are specified for Tense and agreement, which of these two values the Case of the subject in (80).

(80) dað ilin la təddun lwashun
Fut BE-AOR.3p PRES go-IMP.3p children
"The children will be leaving"

I propose, following Ouali and Pires (2005), that the subject in these contexts enters into multiple AGREE (Chomsky 2001a) relations, first with the embedded T which values its Case, and since this TP is not a *phase* (Chomsky 2000) (see also Fernandez-Salgueiro 2004), the valued Case is not deleted and remains visible to the higher (probe) T.

(81) [$_{TP}$ dað [$_{AspP}$ ilin [$_{VP}$ ~~ilin~~ [$_{TP}$ la [$_{AspP}$ təddun [$_{vP}$ lwashun ~~təddun~~ [$_{VP}$ ~~təddun~~]]

In ECM constructions as in (74) represented in (82) below, the same happens except the embedded subject's Case does not get valued by the

embedded tense arguably because it is a "defective" T (as shown by the fact that only non-finite auxiliary *ad* occurs in ECM complement clauses), it gets valued by the matrix *v*, hence the subject is always marked for Accusative in these contexts.

(82) [$_{TP}$ da [$_{AspP}$ diri [$_{vP}$ Ali ~~diri~~ [$_{VP}$ ~~diri~~ [$_{TP}$ ad [$_{AspP}$ teddu [$_{vP}$ Fatima ~~teddun~~ [$_{VP}$]]]]]]]]

Note that the embedded T in BE clauses is always a TNS auxiliary (*ɣa*, *d*að, or Ø) and never the nonfinite marker *ad*, which also supports the argument that the subject is always marked for Nominative in these sentences.

4.5 Agreement

Verbs in Tamazight are inflected for subject agreement. The agreement element is not in complementary distribution with an overt subject DP, as illustrated in (83) and (84).

(83) ytʃa wərba θamən
3s.eat.PER boy honey
"The boy ate honey"

(84) ytʃa θamən
3s.ate.PER honey
"He/the boy ate honey"

The position the subject occupies in Tamazight clause structure does not affect agreement as it is known to do in languages like Standard Arabic, where the verb agrees fully with the pre-verbal subject in person, number and gender, but partially (i.e. just in gender) with the post-verbal subject. In Tamazight, full subject-verb agreement is realized on the verb regardless of whether the subject is post-verbal or pre-verbal:

(85) tʃan waraw θamən
ate.PER.3p boys honey
"The boys ate honey"

(86) araw tʃan θamən
boys ate.PER.3p honey
"The boys, they ate honey"

The agreement paradigm in Tamazight Berber is as follows:

(87) **The AGR paradigm**

	Singular	Plural
First person	[verb]- **x**	**n** -[verb]
Second person	**t**-[verb]-**t**	**t**-[verb]-**m**
Third person	**y**-[verb] (masculine) **t**-[verb] (feminine)	[verb]-**n**[6]

As indicated, some agreement elements, namely the third person singular and the first person plural, are prefixes; others are suffixes (the first person singular and plural); while still others consist of both a prefix and a suffix (i.e. circumfixes) namely the second person singular and plural. I will argue in this work, following Chomsky (2000 and subsequent works), that the morphological agreement is realized as a result of establishing Agree relation between T and the subject DP. This will be discussed in detail in Chapter 5.

One of the characteristics of Berber syntax in general and Tamazight syntax in particular is that subject extraction yields an alteration in the verb agreement morphology; an alteration that has been referred to since Ouhalla 1993 as Anti-Agreement Effect (AAE). When we compare sentences like (88) with sentences like (89) we see that in the former the verb is marked for a full subject-verb agreement whereas in the latter this agreement is altered yielding a neutral form of agreement (AAE). This verb form has been treated as a participle, for example in Ouhalla (2005), and I will follow suit and gloss verbs marked for Anti-Agreement as such (Part).

(88) **y**dda ʕli
leave-IMP.**3sm** ali
"Ali left"

(89) ʕli ag dda**n**
Ali Comp leave.IMP.**Part**
"It was Ali that left"

Interestingly, AAE occurs only if the subject extraction is local that is, within the same clause as in (89), as opposed to when the extraction is long that is, across an embedded clause as shown in (90).

(90) ʕli ay θənna məryəm yədda
Ali that say.PER.3sf Miriam leave.PER.3sm
"It was Ali that Miriam said left"

This phenomenon provides another piece of evidence that complex tense sentences are bi-clausal because only the local clause in these constructions gets affected by A'-movement and Anti-Agreement as shown in (91).

(91) ʕli ag llan yədda
Ali Comp BE.PER.Part go.PER.3sm
"It was Ali who had left"

AAE shows in three different contexts of subject extraction namely: Clefts as in (91), Subject-Relative clauses as in (92), and wh-Clauses as in (93).

(92) θarbat ag rbħ**ən** θuɣ θaddarθ
girl Comp win.PER.Part buy.PER.3sf house
"the girl who won bought a house"

(93) ma ag __ ddan
who leave.PER.Part
"Who left?"

The same effect is observed in complex tense constructions if we compare (94), which is a regular complex tense sentence with full subject-verb agreement marked on both the main verb and the copula BE, and (95) which is a subject wh-extraction example where only the main verb still retains the subject-verb agreement whereas the copula shows AAE.

(94) dað ili ʕli la-ytət
Fut Be.AOR.3sm Ali Pres-eat.IMP.3sm
"Ali will be eating"

(95) ma rað ilin la-ytət
who Fut Be.AOR.Part Pres-eat.IMP.3sm
"who will be eating"

If we consider embedding contexts as in (96), we see that when the subject of the embedded sentence is locally extracted AAE is again observed.

(96) isqsa-yi ʕli ma ra ydu**n**
ask.PER.3sm-me Ali who Fut leave.AOR.Part
"Ali asked who will leave"

The same pattern is attested in ECM constructions as shown in (97), where no subject extraction has taken place hence the verbs are marked for full subject agreement, and in (98), where the subject of the main clause is *wh*-moved and the main verb shows AAE.

(97) θra maria að iddu ʕli
want.IMP.3sf Maria to go.AOR.3sm Ali
"Maria wants Ali to leave"

(98) ma ag ran ʕli að iddu
who that want.IMP.Part Ali to go.AOR.3sm
"Who wants Maria to leave" ***ECM: Local extraction –AAE***

Interestingly, the AAE observed in all these constructions disappears when the subject undergoes a long-distance extraction; in other words when the subject of the embedded clause is moved across all the way to the front of the main clause. Examples (99) and (100) show lack of AAE with long-distance embedded subject extraction in both ECM and complex tense constructions respectively.

(99) **ma** ay θra maria að- iddu ———
who Comp want.PER.3sf Maria to go.Aor.3sm ———
"Who does Mary want ____to leave?"
ECM: long distance extraction–no AAE

(100) **ma** ay θənna Fatima dað illi ____
la-ytət
who that say.PER.3sf Fatima Fut Be-Aor.3sm ____
Pres-eat.IMP.3sm
"who did Fatima say ___will be eating"
Complex Tense: long distance extraction–no AAE

A detailed analysis of agreement and AAE will be presented in Chapters 5 and 6. The next section will be on the so-called orientation particles.

4.6 A Note on Orientation Particles: *d* and *n*

Orientation far from or towards the speaker is marked morphologically in Berber. There are two different morphemes, one for each orientation, reported in the different Berber dialects: *-d* and *-n*. Some Tamazight varieties like Ayt Ndhir dialect described in Penchoen (1973) and Ayt Ayache and Ayt Seghrouchen dialects described in Abdel-Massih (1971) have both morphemes. Others like QTB only has one, namely -d. Penchoen (1973), who calls these morphemes "orientation indices," describes them as follows:

> *d* expresses that the action takes place in the direction of the speaker or the subject referent, or toward an original point of departure, or less precisely, expresses subjectiveness; *n* (much less used) expresses that the action takes place in a direction away from the speaker or in a place which is away from him. (Penchoen 1973: 42)

Abdel-Massih (1971), who refers to these morphemes as "orientation affixes," describes *d* as "denoting proximity," and *n* as "denoting remotedness." He argues that the verbs meaning "come" and "go there" are derived from the same stem *ddu* "go" as illustrated by (101):

(101)	idda	idda-**d**	idda-**n**
	3sm.go.PER	3sm.come.PER	3sm.go.PER there
	"he went"	"he came"	"he went there/away"

(adapted from Abdel-Massih (1971: 42))

In QTB, the orientation particle *–d*, the only orientation morpheme, the dialect has, is used with verbs such as *ddu* "go" above, *ssəfð* "send," and *awi* "take away" and appears suffixed to these verbs. Consider the following examples with *awi* "take" where *d* is glossed as Or(ientation):

(102)	yiwi	wərba	abərrað	i-may-s
	3s.take.PER	boy	teapot	to-mother-his

"The boy took the teapot over to his mother"

(103) yiwi**d** wərba abərrað i-may-s
3s.bring.PER.Or boy teapot to-mother-his
"The boy brought the teapot to his mother"

As we can see, when *d* is affixed to the verb, it changes its meaning from "take" to "bring." One could argue that *d* is not an affix but is part of the lexical verb *yiwid* "bring." This claim however is severely challenged by the fact that the orientation particle *d* has a clitic-like distribution in that it does not always appear affixed to the verb. In negative sentences, it appears adjacent to negation preceding the verb as shown in (104) below. Notice that having the particle *d* following the verb results in ungrammaticality as illustrates (105):

(104) ur-d yiwi wərba abərrað i-may-s
Neg-Or 3s.bring.PER boy teapot to-mother-his
"The boy didn't bring the teapot to his mother"

(105) *ur yiwid wərba abərrað i-may-s
Neg 3s.bring.PER .Or boy teapot to-mother-his

It can also appear as part of a clitic cluster with the object pronominal clitics as illustrated in:

(106) ur-as-t-ið yiwi wərba
Neg-CL_{her}-CL_{it}-CL_{Or} 3s.bring.PER boy
"The boy didn't bring it to her"

This points to the conclusion that *d* does not form a monomorphemic lexical verb with *iwi* "take" when used together *iwid* to mean "bring." It is a separate morpheme and its syntactic distribution seems to be governed by clitic placement rules. Chapter 6 will deal with the distribution of object pronominal clitics whereas the distribution of the particle *d* will be left for future research. The next section will be about negation in Tamazight.

4.7 Negation

Tamazight has two strategies to express sentential negation. The first strategy is by means of one negative marker in a pre-verbal position as shown in

(107). The second strategy is by employing two negative markers as shown in (108); the first maker is pre-verbal and the second is post-verbal.

(107) ur iddi wərba ɣr-skila
Neg 3sm.go.PER.neg boy Con.boy to-school
"The boy didn't go to school"

(108) ur iddi ʃa wərba ɣr-skila
Neg 3sm.go.PER.neg boy ʃa Cons.boy to-school
"The boy didn't go to school"

The negation particle ***ur*** always precedes the verb as in (109), as well as the tense particles *dað* and *la* (if present) as shown, respectively, by the examples in (110) and (111):

(109) **ur** uryəx θabrat
Neg write.PER.1s letter
"I didn't write the letter"

(110) **ur** dað aryəx θabrat
Neg Fut write.AOR.1s letter
"I will not write the letter"

(111) **ur** la taryəx θabrat
Neg Pres write.IMP.1s letter
"I am not writing the letter"

Failing to precede the verb and the tense markers results in ungrammaticality as illustrated in (112), (113), and (114):

(112) *uryəx **ur** θabrat
write.PER.1s Neg letter
"I didn't write the letter"

(113) *dað **ur** aryəx θabrat
Fut Neg write.AOR.1s letter
"I will not write the letter"

(114) *la **ur** taryəx θabrat
Pres Neg write.IMP.1s letter
"I am not writing the letter"

The second Neg element *ʃa* can occur in a post-verbal position as shown in (108) mentioned earlier or in a pre-verbal position where it also precedes the first negative marker *ur* as in (115):

(115) ʃa ur iddi wərba ɣr-skila
Neg Neg 3sm.go.PER.neg Cons.boy to-school
"The boy didn't go to school"

It is the negative element *ur* however that carries negative force in the sentence and is therefore obligatory. Dropping *ur* and leaving *ʃa* either in a pre-verbal position or post-verbal position results in ungrammatical sentences as illustrated in (116) and (117):

(116) *ʃa iddi wərba ɣr-skeela
Neg 3sm.go.PER.neg Cons.boy to-school
"The boy didn't go to school"

(117) *iddi ʃa wərba ɣr-skeela

Despite the fact that ʃa is an optional negative element in Tamazight, there are contexts where it is prohibited altogether. These contexts were first pointed out (to my knowledge) by Nait-Zerrad (1994) in his work on Taqbaylit Berber (spoken in Algeria). These contexts or environments are: Coordinated Negative Clauses, Relative Clauses, Interrogative clauses, and "Swear" constructions.

As we can see in (118), which is an example of coordinated clauses, each clause has a negative marker, namely *ur*, occurring in its canonical position preceding the main verb. When it comes to the optional negative marker *ʃa*, it is prohibited both pre-verbally as shown in (119) and post-verbally as shown in (120).

(118) ur tʃin ur -ax dʒin að nətʃ
Neg eat.neg.3p.PER Neg -us let.neg.3p.PER to eat.neg.3p.AOR
"They didn't eat and they didn't let us eat/ they neither ate nor let us eat"

(119) (*ʃa) ur tʃin (*ʃa) ur -ax dʒin að nətʃ
(*Neg) Neg eat.neg.3p.PER (*Neg) Neg –us let.neg.3p.PER to eat.neg.3p.AOR

(120) ur tʃin (*ʃa) ur -ax dʒin (*ʃa) að nətʃ
Neg eat.neg.3p.PER (*Neg) Neg –us let.neg.3p.PER (*Neg) to eat.neg.3p.AOR

In clauses such as (121), where we have a negative root clause with a subject relative clause, both the root clause and relative clause must carry negation. Failure to carry negation either at the root clause level, or at the relative clause level, results in ungrammaticality as shown in (122) and (123) respectively:

(121) ur illi lmaħal ur izri
Neg 3sm.be.neg.PER house neg 3sm.visit.neg.PER
"There isn't a house he hasn't visited"

(122) *illa lmaħal ur izri
3sm.be.PER house neg 3sm.visit.neg.PER
"There is a house he hasn't visited"

(123) *ur illi lmaħal izra
Neg 3sm.be.neg.PER house 3sm.visit.PER
"There isn't a house he has visited"

Regarding the distribution of the optional negative marker *ʃa* in these environments, it is simply prohibited as shown in (124) and (125):

(124) (*ʃa) ur illi lmaħal (*ʃa) ur izri
(Neg) Neg 3sm.be.neg.PER house (*neg) Neg 3sm.visit.neg.PER
"There isn't a house he hasn't visited"

(125) ur illi (*ʃa) lmaħal ur izri (*ʃa)
Neg 3sm.be.neg.PER (neg) house Neg 3sm.visit.neg.PER (neg)

The next context where *ʃa* is banned is in interrogative clauses such as (126):

(126) ma ur iddin ɣr-skeela?
who Neg 3sm.go.PER.Part to-school
"Who didn't go to school?"

Introducing *ʃa*, either pre-verbally or post-verbally, causes the sentence to become ungrammatical as in (127):

(127) ma (*ʃa) ur iddin (*ʃa) ɣr-skeela
who (neg) Neg 3sm.go.PER.Part (*neg) to-school
"Who didn't go to school"

The last environment where *ʃa* is prohibited is in what I would call *Swear Constructions*. There are two ways of *swearing* in Tamazight. The first one is by mentioning a divine word one swears by, which is typically God, and it is in this respect similar to the English expression *by God* in "*by God I will never do that again*" for example. The second way is by using a verb equivalent to the verb *swear* in English as in "*I swear I will never do that again.*" Examples of these two strategies are given in (128) and (129) using negation:

(128) wLah ur θddiθ ass-a
who Neg 2s.go.neg.PER.2s day-this
"by God you will not leave today"

(129) guləx ur θddiθ ass-a
swear.1s.PER Neg 2s.go.neg.PER.2s day-this
"I swear you will not leave today"

As just mentioned, this is another environment where the use of the negative marker *ʃa* is simply impossible neither in a pre-verbal position nor in a post-verbal position as illustrated in (130) and (131):

(130) wLah (*ʃa) ur θddiθ (*ʃa) ass-a
who (neg) Neg 2s.go.neg.PER.2s (neg) day-this
"by God you will not leave today"

(131) guləx (*ʃa) ur θddiθ (*ʃa) ass-a
swear.1s.PER (neg) Neg 2s.go.neg.PER.2s (neg) day-this
"I swear you will not leave today"

The last aspect of negation that will be discussed in this section is the interaction between the negative marker *ur* and the N-(egative) words, in Tamazight, such as *walu* "nothing" and *agidʒ* "nobody." The distribution of these N-words in Tamazight must be licensed by the negative marker *ur* as shown in (132) and (133):

(132) ur iddi agidʒ ɣər ssuq
Neg 3sm.go.neg.PER not-even-one to souk
"Nobody went to the souk"

(133) ur ufix walu
Neg 1s.find.neg.PER nothing
"I found nothing"

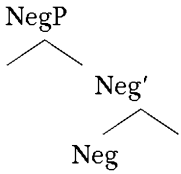
If we remove the negative marker form the sentences above, we end up with the following ill-formed sentences:

(134) *idda agidʒ ɣər ssuq
3sm.go.PER not-even-one to souk

(135) *ufix walu
1s.find.neg.PER nothing

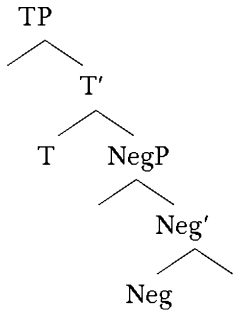
Chapter 8 will provide a typology of negation in Berber and a detailed analysis of the syntax of negation and negative concord in Tamazight. I will assume, following for example, Pollock (1989), Chomsky (1991) and Ouhalla (1990), that Neg° heads its own X-bar projection in Tamazight Berber:[7]

(136)



I will also assume that the structural position of NegP is higher than TP in Tamazight as shown in:

(137)



If we compare for example English, where NegP is assumed to be immediately above VP, and Tamazight, we find that negation in English always follows the auxiliary, whereas in Tamazight negation always precedes the auxiliary. Consider the following examples:

(138) ur dað aɣəx ibəttan
Neg Fut buy.1s clothes
"I will not buy clothes"

(139) *dað ur aɣəx ibəttan

(140) Mary will not drink milk.

(141) *Mary not will drink milk.

With a structure where NegP is higher than TP and AgrP, it would not be complicated to derive the grammatical Tamazight sentence in (138) above, but with a structure where NegP is, for example, immediately above VP, there would be instances of movement of the negative head *ur* "not" which would need to be independently motivated and which would not be favorable for economy reasons (Ouali 2003). A more detailed analysis is provided in Chapter 8. We move now to discuss complementizers in Tamazight in the next section.

4.8 Complementizers

There are three types of complementizers in Tamazight: (a) Complementizers that are used mainly in relative clauses, cleft constructions, and interrogative clauses, and they are: the complementizer *ay* and its phonological variant *ag*,[8] (b) The complementizer *bəlli* which is used in embedded clauses, and (c) A complementizer which is used as a Q(uestion) element in yes-no questions namely: *is*.

4.8.1 The complementizer *ay*

There are three contexts where *ay* is found. The first one is interrogative clauses, direct and indirect. The sentences in (142)–(144) are examples of direct interrogative clauses. Example (142) is a case of a subject interrogative

clause, example (143) is a case of an object interrogative clause, and example (144) is a time interrogative clause:

(142) ma ag ddan
who Comp leave.PER.Part
"Who left"

(143) ma ay θra Fatima
what Comp 2s.want.PER Fatima
"what does Fatima want?"

(144) milmi ag dda ʕli
when Comp go.PER.3sm Ali
"When did Ali go?"

The sentence in (145) is an example of indirect interrogative clauses:

(145) rix að ʕlux ma ay θra Fatima
want.1s.PER to see.1s.AOR what Comp 2s.want.PER Fatima
"I want to see what Fatima wants"

I will assume following Boukhris (1998) that *ay*, which presumably occupies C in the clause structure of Tamazight, is specified for [+wh] feature in both types of interrogative clauses.

The second context where the complementizer *ay* is found is relative clauses as in (146):

(146) θdda θməttut ag snən Fatima
3sf.leave.PER woman Comp 2s.want.PER Fatima
"The woman who knows Fatima has left?"

Unlike in interrogative clauses, the complementizer in relative clauses is optional as in (147):

(147) θdda θməttut snən Fatima
3sf.leave.PER woman 2s.want.PER Fatima
"The woman who knows Fatima has left?"

This optionality, however, disappears when the relativized argument is not a subject or a direct object (Boukhris 1998). If the relativized argument

is an indirect object as in (148) or a Prepositional Phrase as in (149), the overt realization of the complementizer *ay* becomes obligatory:

(148) θaməttut a(y)-mi θwʃa Fatima ləflus θdda
woman Comp-P-CL 2s.give.PER Fatima money 3sf.leave.PER
"The woman, that Fatima gave money to, left"

(149) idda-i ssarut a(y)-s-mi truyəx lbab
3sm.go.PER.me key Comp-with-CL 1s.open.IMP door
"I lost the key that I open the door with"

Notice that, in both (148) and (149), there is a morpheme *mi* that appears with the complementizer. In (149) there is also a preposition (*s-* "to") that precedes *mi* and follows the complementizer. There does not appear to be an agreement in the literature about the nature of this particle. Penchoen (1973: 69) treats it as a preposition and writes in a footnote: " i 'to, for' takes the form of mi in an indirect object relative clause." Examples such as (149), where *mi* is found with a the preposition *s-* "with," are clear indication that *mi* is not itself a preposition. Loubignac (1924), in his work on Tamazight of Zayan and Ayt Sgougou, describes *mi* as a particle that follows different prepositions in relative clauses, as well as relative pronouns and interrogative pronouns. This is also attested in the Tamazight dialect under study in this work as seen in (148) and (149) provided earlier. Boukhris (1998) treats *mi* a complementizer in the Zemmour dialect she analyzes. In this dialect, according to her, the complementizer used in relative clauses is *lli* (the counter part of *ay*) as shown in (150):

(150) argaz lli iffR-n
man Comp leave.PER.Part
"The man who left . (adapted from Boukhris 1998: 178)

When a PP adjunct is relativized the *mi* particles appears with the preposition and the relative pronoun *lli* is banned as illustrated in (151):

(151) argaz ag-mi dda-n
man with-who go.PER.3p
"The man with whom they left . ."

(152) *argaz ag-mi lli dda-n
man with-who who go.PER.3p
"The man with whom they left .
(adapted from Boukhris 1998: 179)

This apparent complementary distribution of *lli* and *mi* in Boukhris's dialect led her to treat them as two elements of the same syntactic category. They are both Comp elements that occupy the same head that is, C. This analysis is not supported by the facts from other Tamazight varieties especially the ones described, in Loubignac (1924) and Penchoen (1973) for example, and the one described in this book namely QTB. There are a lot of examples such as (148) where the *mi* co-occurs with the Comp element *ay*. This raises the question again about the categorical status of this particle. The facts seem to point to the possibility that it is a focus marker realized on a head associated with the left periphery of the clause structure. This could be possible within an approach that assumes a split C structure which makes Boukhris's analysis partially feasible.

To sum up, the complementizer used in relative clauses is not uniform across Tamazight dialects. Ayt Ndhir Tamazight has the complementizer *nna* (Penchoen 1973), the Zemmour dialect described in Boukhris (1998) uses *lli*.[9] Despite this lexical variation, this complementizer has the same syntactic properties in Tamazight.

The third environment where *ay* is realized is Cleft constructions as illustrated in (153):

(153) θaməttut-a ay θssən Fatima
woman-this Comp 2s.Know.PER Fatima
"It's this woman that Fatima knows"

The phrases that can be clefted are not restricted to arguments such as direct objects as in (153), but they could also be subjects as in (154) and indirect objects as (155):[10]

(154) θaməttut-a ay ssnən Fatima
woman-this Comp 3s.Know.PER.Part Fatima
"It's this woman that knows Fatima"

(155) θamәttut-a ay-i-mi θwʃa Fatima ssarut
woman-this Comp-Comp 3s.give.PER Fatima the-key
"It's this woman that Fatima gave the key to"

Adjuncts can also be clefted as shown by the clefted locative PP in (156):

(156) rbað a(y)-ɣәr-mi θdda Fatima
Rabat Comp-to-Comp 3sf.go.PER Fatima
"It's Rabat that Fatima went to"

There is one important property that marks the syntax of the complementizer *ay* and that is it can host object pronominal clitics as shown in (157):

(157) θamәttut-a ay-s-t ywʃan i-Fatima
woman-this Comp-CL_{her}-CL_{it} give.PER.Part i-Fatima
"It's this woman that gave it Fatima"

This distribution of object pronominal clitics will be discussed in detail in Chapter 6. The second type of complementizers that we find in Tamazight is *bәlli* "that."

4.8.2 The complementizer *bәlli*

The complementizer *bәlli* is a word borrowed from Moroccan Arabic. It is typically the complementizer used in embedded clauses after *ssәn* "know" and *inna* "say" type verbs, and it might precede the mood marker *la*. It is however optional and so is the mood marker *la* as shown in (158):

(158) ssnәx (bәlli) (la) θuɣ Fatima θaddart
know.PER.1s (that) (la) 3sf.buy.PER Fatima house
"I know that Fatima bought the house"

Unlike the complementizer *ay*, this complementizer cannot host pronomial clitics.

4.8.3 The complementizer *is*

This particle is mainly used in yes-no direct and indirect interrogative clauses as illustrated in (159) and (160) respectively.

(159) is θdda θmətttut ag snən Fatima
Q 3sf.leave.PER woman Comp 2s.want.PER Fatima
"Did the woman who knows Fatima leave?"

(160) ur ssinx is θdda θmətttut ma laa
Neg 1s.know.PER Q 3sf.leave.PER woman or not
"I don't know if the left or not?"

This complementizer can also host object pronominal clitics as in (161):

(161) is-as-t wʃan
Q-CL_{her}-CL_{it} 3p.give.PER
"Did they give it to her?"

Having discussed the different complementizers that we find in QTB and Tamazight in general, the interesting point that needs to be reiterated here is that interrogative clauses as pointed out before are formed by combining a wh-word with either the complementizer *ay* or the complementizer *ag*. We will see in the next chapter what this tells us about the nature of complementizers in such contexts.

(162) milmi ag idda ʕli ʔ
when Comp 3sm.go.PER Ali
"When did Ali go?"

One implication this has is that the verb never moves to C^0 in wh-clauses as it does in a lot of languages, such as French. Does the verb ever move to C^0 in other types of clauses in Tamazight? Is C^0 an obligatory overt head in the structure of the Tamazight clause? We will return to these two questions in Chapters 6 and 7.

4.9 Tamazight Clause Structure

To summarize, in this chapter I discussed different aspects of the verb morphology including agreement, tense, and aspect, negation and complementizers in Tamazight (QTB). I also discussed some of the motivations for the sentential structure that will be used in this work. I argued that tense and aspect have separate projections in the clause structure namely TP

and AspP; with TP higher than AspP in the structure of the clause. NegP, I argued, is higher in the functional domain than both TP and AspP. The following is the phrase structure I assume for QTB:

(163) [CP [NegP [TP [AspP [VP]]]]]

With an analysis of clausal architecture of QTB now in place the next chapter returns to one of the main topics of this book. I will discuss subject-verb agreement, and the different contexts in which this agreement is suppressed. I will then detail the analysis proposed in Chapter 3 and present an account for AAE.

Chapter 5

Subject-Verb Agreement and Agreement Suppression Effects

As mentioned in the previous chapter, verbs in Tamazight Berber in general and QTB in more specific are always inflected for subject agreement. The agreement element can co-occur with the subject as illustrated in (1). QTB is also a pro-drop language as illustrated in (2).

(1) ytʃa wərba θamən
3s.eat.PER boy honey
"The boy ate honey"

(2) *pro* ytʃa θamən
pro 3s.eat.PER honey
"He ate honey"

There are different possibilities as to which functional head is specified for Agreement features; it could be T°, Asp°, v° or Agr° (assuming an independent AgrP projection). In this book I will assume, following a recent Minimalist approach (Chomsky 2001a, 2004), that it is T^0 that is specified for φ-features. T enters into a Probe-Goal relation with the *v*P-internal subject. Given the structure argued for in the previous chapter and repeated in (3), I will assume that the verb is merged under V and moves to Asp through *v*. The subject is initially merged in [Spec-*v*P] where it surfaces in post-verbal-subject sentences such as (4), but moves to a higher position in pre-verbal-subject sentences such as (5).

(3) [CP [TP [AspP [vP [VP]]]]

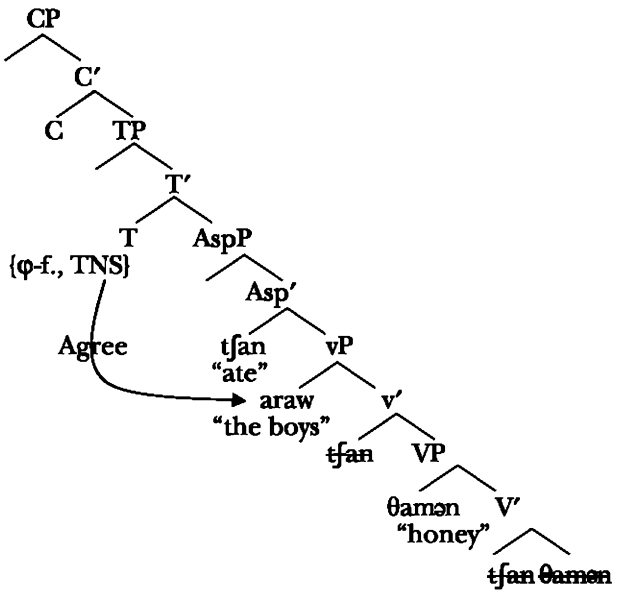
(4) tʃan waraw θammən
ate.PER.3p boys honey
"The boys ate honey"

(5) araw tʃan θammən
boys ate.PER.3p honey
"The boys, they ate honey"

5.1 Subject-Verb Agreement: Analysis

How does the theory of Agree, adopted here, account for the subject-verb agreement facts in Berber? Looking at (6), which is a representation of (4), I argue that the Probe T, which is specified for unvalued φ-features, will enter into a Probe-Goal Match relation with the closest Goal that is, the subject DP which bears valued φ-features and unvalued Case feature. As a result of the Agree operation, the φ-features of T and Case feature on the DP are valued.

(6)



The crucial assumption that marks the starting point or basis for the analysis I am going to develop is stated in this quote from Chomsky 2004:

> T functions in the Case-agreement system only if it is selected by C, in which case, it is also complete. Further, in just this case T has the semantic properties of true Tense. These cannot be added by the

φ-features, which are uninterpretable; they must therefore be added by C. Hence T enters into feature-checking only in the C-T configuration. (Chomsky 2004: 13)

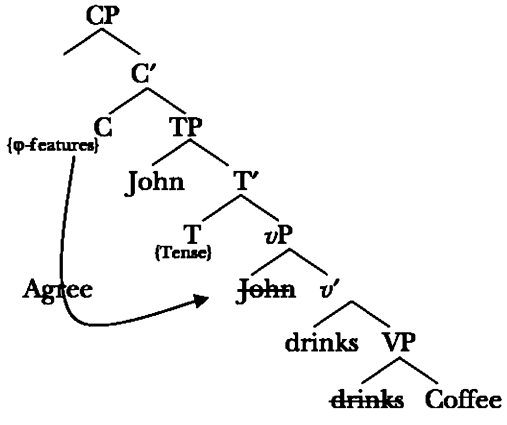
Given this, we need to revise the analysis I presented in (6). Before C is merged, T is only specified for tense features. Upon merging C, it transfers its [-interpretable] φ-features to T, and only then T, now having [-interpretable] φ-features, probes the subject. As a result these φ-features are valued and deleted. The questions that beg to be answered are:

a. What does φ-features transfer mean?
b. When C transmits its φ-features to T, does it mean that C now does not have these features or a copy of these features?
c. Can C transfer its φ-features and retain a copy of these?

Let us take the first question. My understanding is that these features are literally passed on from C to T. I have nothing too sophisticated to say about this. I do not think Chomsky is clear on this issue. Another related question to this is why does C transfer its φ-features to T in the first place? Again Chomsky is not clear on this issue either. However, one important possibility and motivation for this is minimal search. When C is merged, its φ-features are [-uninterpretable] which, if they are not transferred to T, will make C active hence probe the subject as represented in (8) (a representation of (7)):

(7) John drinks coffee

(8)



Notice that T is "closer" to the subject (prior to its movement) than C. C will have to probe the subject over T, which is not preferred under minimal search.

Lets us take the second question now, which is: does C transmit its φ-features to T without keeping a copy of these features?

The answer to this question, considering the example from English in (7), is yes for the following reason.

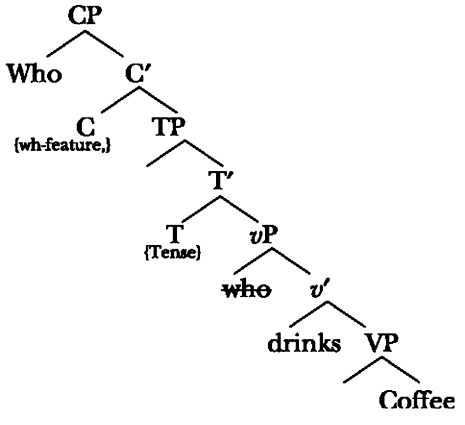
These φ-features are [-interpretable] and presumably make any head that bears them "active." When C transfers them to T and retains a copy, now both C and T are active and would act as Probes. Minimal search would enable T, now bearing [-interpretable] φ-features to probe the subject. After the Agree operation takes place the φ-features on T are valued as well as the Case feature on the DP subject. C, now bearing a copy of the [-interpretable] φ-features will not be able to find an active goal because the Case on the subject DP has been valued and hence it is inactive and invisible to C. Therefore, if C retains a copy of φ-features, the derivation is doomed to crash. This leads us to conclude that when C is merged it transfers its φ-feature to T without keeping a copy, let us call this: DONATE.

(9) **DONATE**
Transfer φ-features from C to T without keeping a copy.

Let us take the third question which is: can C keep a copy of these features? We just showed that it can not in English declarative sentences, but now the question is how do we ever get wh-questions in English? Consider the following sentence in (10) represented in (11).

(10) Who drinks coffee?

(11)



With the assumption that the wh-word has a [-interpretable] wh-feature whereas C has a [+interpretable] wh-feature, let us see what happens if we apply DONATE.[1] C transfers its φ-features to T without keeping a copy. Now T is active by virtue of bearing [-interpretable] φ-features whereas C is not. T probes and Agrees with the wh-subject, and as a result of this agreement the φ-features on T are valued as well as the Case feature on the wh-subject. The [-interpretable] wh-feature on the wh-word is not however valued, and will not be able to be valued because the head that is needed for this to happen, namely C, is now inactive because it transferred its [-interpretable] φ-features to T. The derivation is doomed to crash. Let us leave this as an open problem for now and I will return to it in the next section.

Let us now ask another question and that is: can C keep the φ-features and not transfer them at all? I will show that this is exactly the case that we find in the subject extraction facts in Berber.

5.2 Subject Extraction and Anti-Agreement Effects: The Facts

There are three contexts which show lack of subject-verb agreement in Tamazight and in Berber in general as pointed out by researchers such as Ouhalla (1993, 2005b). These are: Subject-wh clauses, Subject-relative clauses, and Cleft-constructions. This obligatory lack of agreement between the verb and the subject, triggered by extraction of the subject is called AAE, as previously mentioned, (Ouali and Pires (2005), Ouhalla (1993, 2005b), and Richards (2001)). If we look at the two examples in (12) and (13), we see that the subject-verb agreement is overtly marked on the verb.

(12) **θəʕla** θmttut araw VSO
3sf.seePER woman boys
"The woman saw the boys"

(13) θamttut **θəʕla** araw SVO
woman **3sf**- seePER boys
"The woman, she saw the boys"

This subject-verb agreement is suppressed in the subject extraction environment. (14) is an example of a subject wh-extraction which shows AAE

on the verb; and as illustrated by (15), full subject-verb agreement is impossible.

(14)	mani θamttut	ag	ʕla**n**	araw
	which woman	COMP	see.PER.Part	boys
	"Which woman that saw the boys"			
(15)	*mani θamttut	ag	**θ**ʕla	araw
	which woman	COMP	3sf.see.PER	boys
	"which woman saw the boys?"			

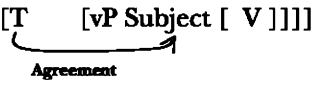
The same pattern is observed in subject relative clauses as in (16) and (17), and clefts in (18) and (19) where subject-verb agreement is again impossible.

(16)	θamttut	ag	ʕla**n**	araw
	woman	COMP	see.PER.Part	boys
	"The woman who saw the boys"			
(17)	*θamttut	ag	**θ**ʕla	araw
	woman	COMP	3sf-see.PER	boys
	"the woman who saw the boys"			
(18)	θamttut -a	ag	ʕla**n**	araw
	woman-this	COMP	see.PER.Part	boys
	"It was this woman that saw the boys"			
(19)	*θamttut -a	ag	θʕla	araw
	woman-this	COMP	3sf-see.PER	boys

One of the main questions that I will address is: how can one account for these facts under a derivational approach and given the Probe-Goal Relation and the Agree operation adopted here? Note that Agree holds between T which is specified for a full set of unvalued φ-features and the subject which is specified for valued φ-features and unvalued Case feature; and according to Chomsky's analysis the Case feature of the DP gets valued and deleted as a "reflex" or a result of full agreement in φ-features between the probe T and the goal DP. If full agreement is a pre-requisite for Case valuation and deletion, how can one derive the Berber subject extraction facts where T presumably is not specified for a full set of φ-features?

The proposal that I will be defending throughout can be summarized as follows: Subject-verb agreement is a reflex of an Agree(ment) relation established between the T and the subject as illustrated in (20):

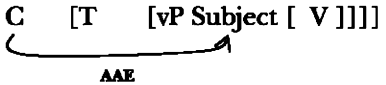
Subject-verb agreement configuration

(20) 

T is not the locus of φ-features but inherits these features from C.

AAE arise when an Agree relation is established between C, the locus of φ-features, and the subject as illustrated in (21).

AAE configuration

(21) 

AAE is attested in a number of other languages, and since Ouhalla (1993), there have been different analyses of this phenomenon. In the next section I will briefly review these analyses and discuss whether each one is compatible with the analysis advanced in this work. It is important to emphasize however that none of these previous approaches adopts the Feature-Inheritance mechanism, which is crucial for the proposal developed in this book.

5.3 Previous Analyses for Anti-Agreement Effects

The data that shows loss of agreement in subject extraction contexts have been pointed out by descriptive linguists who have worked on different varieties of Berber and who were first to characterize these verb forms as *participles*, for example Laoust (1912) in his work on Chenoua dialect, Loubignac (1924) in his work on Tamazight of Zayan (Zayan), Basset (1952), to cite just a couple. Recently, Berber linguists such as Guerssel in Guerssel and Hale (1987), Ouhalla (1993, 2005b), Sadiqi (1986) among

many others have analyzed these facts within the Generative framework. This phenomenon has also been reported in a number of other languages and among them are: Celtic (McCloskey (1990)), Fiorentino and Trentino (Brandi and Cordin (1989), Ouhalla (1993)), Ibibio (Baker 2008), Kikuyu (Clements 1984), Kinande (Schneider-Zioga 1995, 2000, 2007) among others. However, it was Ouhalla's (1993) seminal work and analysis that made this phenomenon, which he referred to as AAE, known in the mainstream generative syntax. Subsequently, a number of different analyses have been proposed and in this next section I will review some of these proposals.

5.3.1 Ouhalla 1993

Ouhalla analyzes AAE as "a strategy used by null subject languages, in particular those which locally move their *wh*-subjects in the syntax, to avoid the licensing of a resumptive pro in the closest subject position" (Ouhalla 1993: 477). Let us compare the sentence in (22) and the one in (23) from QTB:

(22) *pro*$_i$ θəʕla θməttut$_i$ argaz-nəs
pro see.3sf.PER woman man-her
"The woman saw her husband"

(23) mani θaməttut$_i$ ag (*pro$_i$)/ t$_i$ ʕlan argaz-nəs
which woman comp (*pro$_i$)/ t$_i$ see.Part.PER man-her
"which woman saw her husband"

The first example (22) is a VSO sentence with full subject-verb agreement. Full agreement in such configurations licenses *pro* in the subject position. In (23) we have a wh-operator (extracted subject) preceding *pro*. If *pro* is licensed in the subject position, as a resumptive pronoun variable, it must be A′-bound by the wh-operator causing a binding violation, in this case Aoun and Li's (1989) "A′-disjointness requirement on the distribution of pronominal elements" This requirement, which is part of Binding Principle B, bars pronouns from being locally bound. As a strategy, to derive sentences such as (23), the extracted subject moves through the subject position (Spec-IP) leaving a trace, the agreement on the verb is suppressed, and consequently *pro* cannot be licensed deducing the so-called AAE.

Ouhalla's (1993) is not incompatible with the analysis developed in this work. A T-Subject (overt subject) agreement relation can be established resulting in full subject Agreement which will license *pro* in Spec, TP (IP). A C-Subject agreement relation however will give rise to AAE, which in return cannot license *pro*. Note that pro, unlike the overt subject, is not specified for wh-feature or some other left-periphery feature and therefore C skips it to establish a relation with the overt subject. However, as pointed by Schneider-Zioga (2007), the problem with a binding theoretic approach is that it is not clear what binding is under Minimalism. Recently, Ouhalla (2005b) abandoned his original analysis for an alternative approach which I review next.

5.3.2 Ouhalla 2005

In this paper Ouhalla argues that lexical items are not inherently specified for syntactic categories such [V] and [N]. They are merely "Roots" that acquire these categorical features by virtue of being selected by a head bearing certain features including agreement features. The verbal feature reduces to the feature [Person] and the nominal feature reduces to [Class]. When selected by a head (Pred^0 in Ouhalla's analysis), the root is realized a verb as schematized in (24). When selected by a head specified for [Number] and [Class] the root acquires the categorial status of "participle," the form usually found in AAE environments, as shown in (25).

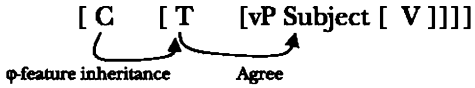
(24) [Pred[PERSON, CLASS] [V]] (verbal predicate)

(25) [Pred[NUMBER,CLASS] [V]] (participial predicate)

Ouhalla (2005b: 664)

Ouhalla (2005b) argues that subject-verb agreement is a result of a syntactic relation established between the functional head F (selecting the Root) and the Root itself on one hand and between F and the subject on the other hand. F is Pred in Berber whereas it is T in English. Ouhalla also argues that in languages such as Berber T is only specified for tense; the agreement features are part of the feature make up Pred^0, whereas in languages such as English T is specified for both tense and Agreement features. The analysis I will defend here defers right at the offset from Ouhalla' s analysis in that it assumes that T is not inherently specified for Agreement features

either but acquires these features from C. I will assume following Chomsky (2000, 2004) that C is the locus of Agreement features or φ-features and that T inherits these features in the course of the derivation as schematized below:

(26) 

After feature inheritance takes place and prior to establishing an agreement relation between T and the subject, both φ-features and the tense feature reside in T despite the fact that they are spelled out on different lexical items in Berber: tense as a tense particle and agreement as an inflection on the verb, and that these lexical items can be separated by, for example, object pronominal clitics.

5.3.3 Phillips 1998

According to Phillips (1998) AAE arises when the verb does not move to T (see also Ouhalla 2005b for a similar proposal) in subject wh-clauses. Unlike *pro*, the wh-trace in Spec,TP does not need to get licensed by agreement (see also Ouhalla 1993). Since the verb does not move to T, it ends up with default agreement (AAE). There is a serious a problem with this analysis in that it does not account for Cases with long-distance extraction such as (27):

(27) mani θaməttut$_i$ ag inna ʕli [t$_i$ θʕla argaz-nəs]
which woman comp 3sm.say.PER Ali [t$_i$ 3sf.see.PER man-her]
"which woman did Ali say saw her husband"

According to Phillips (1998), the verb in the embedded clause does not need to move to T since the trace in its Spec does not need to be licensed. Yet, we see that the verb carries full subject-verb agreement and not the default agreement (AAE) as Phillips predicts and illustrated by the ungrammatical sentence in (28).

(28) *mani θaməttut$_i$ ag inna ʕli [t$_i$ ʕlan argaz-nəs]
which woman$_i$ comp 3sm.say.PER Ali [t$_i$ see.Part.PER man-her]

5.3.4 Richards 2001

Richards (2001) analyzes AAE as a PF induced phenomena. He proposes that chains cannot have two positions with strong features. Strong features on a head, for example T, are instructions for PF to pronounce the link of the chain in its Spec position. In cases of wh-questions in Berber for example, we have a chain consisting of the wh-word in Spec, CP and its trace/copy in Spec, TP, and both C and T have strong features and therefore they will both instruct PF to pronounce the wh-word in their Spec. These conflicting instructions cause the derivation to crash. Richards (2001) argues then that the nonagreeing T of an AAE structure is a T which carries a weak EPP feature and that C is the only head with a strong feature. Therefore, there is no contradiction in spelling out the chain. The one minor problem with this analysis is that the notions "Strong" vs. "Weak" features have been dispensed with in recent Minimalist paradigms, for example in Derivation by Phase (DbP) (Chomsky 2000 and his subsequent work). The more serious problem, however, is its failure to account for Cases with long-distance extraction such as (27) where both matrix C and lower T, presumably have Strong features since full subject Agreement is obligatory on the embedded verb, and yet only the link of the chain in matrix Spec, CP is pronounced and the link in Spec, TP is not.

5.3.5 Schneider-Zioga (2007) and Baker (2008)

These two proposals were made based on facts from two closely related languages namely Kinande and Ibibio. Schneider-Zioga's proposal is based on Kinande and Baker's proposal is based on Ibibio. Schneider-Zioga's proposal is similar to Ouhalla's (1993) original analysis in that it has a Binding flavor. Only full subject-verb agreement can license *pro*. Subjects are left dislocated occupying Spec, TopP (Schneider-Zioga assumes the Split C-hypothesis of Rizzi 1997, 2004). However, only one phrase can occupy the left-edge in Kinande.

(29) [CP C [TopP Okon$_i$ Top [TP pro$_i$Agr$_i$_T .]]]

In Subject wh-clauses full agreement is not possible; it is suppressed resulting AAE. Schneider-Zioga argues that AAE is a last resort strategy to avoid

the violation Grohmann's (2003) Antilocality Hypothesis which states that a phrase cannot move from one position to another position within the same domain as schematized below:

(30) *[CP who$_i$ C [TopP t_i Top [TP pro$_i$ Agr$_i$_T .]]]

The domain in this case is the left-edge where the wh-phrase A′-moves from one A′-position[TopP] to another A′-position [CP]. By suppressing agreement on T, *pro* is not licensed and the subject then occupies Spec, TP and moves from the TP domain to the CP domain without violating Grohmann's Antilocality Condition.

(31) [CP who$_i$ C [TP ~~who~~$_i$ Agr$_i$_T .]]]

Baker (2008) argues that Ibibio also exhibits AAE but interestingly AAE arises even when the wh-phrase remains in-situ:

(32) Okon a´-ke-dia ekpaŋ.
Okon 3sS-PAST-eat porridge.
"Okon ate porridge."

(33) Anie ɪ´-k-i-dia ekpaŋ? (*a-ke-dia)
who I-PAST-I-eat porridge
"Who ate porridge?" (Baker 2008: 616)

Baker (2008) argues that this poses a serious problem for Schneider-Zioga's analysis since the subject in Ibibio does not need to move from Spec, TP and even if it is first merged in Spec, TopP, it does not need to move to Spec, CP inducing a violation of Grohmann's Antilocality Condition. Baker's solution is the following: AAE is a result of grammatical feature deletion in Chains. He argues that in a movement chain either a lower copy of the chain can be deleted in which case the higher copy is phonologically realized or the higher copy is deleted in which case the lower copy is phonologically realized. Copies in movement chains do not trigger agreement in the same way that similar NPs do when they are not in movement chains because they lack θ-features, and therefore there is nothing for the T to agree with. Subject agreement on T must then be

realized as an "invariant," "default agreement form." This illustrated in (34) and (35):

(34) [CP <goat> C [TP <~~goat~~> Agr-T+eat [vP yam]]]
(Baker 2008: 625)

In (34) copy deletion applies to remove both the phonological features and the semantic ("quantificational, [+wh]") features of the lower copy along with them, the φ-features of the lower copy are also removed which gives rise to the AAE.

(35) [CP <~~who~~> C [TP <who> Agr-T+eat [vP porridge]]]
(Baker 2008: 625)

In the *wh*-in-situ construction in (35), deletion removes the phonological features of the higher copy and the semantic "([+wh], quantificational)" features of the lower copy. And as a result of the postulated parameter in (36) the φ-features are deleted with the semantic ([+wh], quantificational) features of the lower copy giving rise to AAE in Ibibio.

(36) φ-features are deleted along with semantic (scope-defining) features on copies in a movement chain.
(Baker 2008: 626)

Both Schneider-Zioga (2007) and Baker (2008) do not adopt Chomsky's (2000) proposal of agreement where he argues that agreement results from a Probe-Goal relation between a head and phrase. The head bears the interpretable features and the phrase bears the interpretable features and as a result of a Match and Agree relation the phi-features on the head are valued and deleted. In both Schneider-Zioga (2007) and Baker (2008) especially Baker, agreement or lack thereof depends on establishing a Spec-head relation between a copy in the movement chain and T. All things being equal, I will adopt Chomsky's (2005) proposal where Spec-head relation is not eliminated as a syntactic relation as stated in this quote cited in Chapter 3 and repeated below:

The specifier-complement distinction loses independent significance, except in that the complement of a head H should be the only domain

> accessible to operations driven by H, by conditions of minimal search, the core property of c-command, but barring m-command and specifier-head relations [. .]. "complement" and "specifier" ***are just notations for First-Merge and later-Merge*** [italics H.O.]. (Chomsky 2005: 14)

In my analysis of AAE I will adopt Chomsky's (2004, 2005) proposal detailed in Chapter 3. I will assume that C is the locus of phi-features and that T inherits these features as stated in the quote repeated below:

> In the lexicon, T lacks these features [i.e. φ-features H.O.]. T manifests them if and only if it is selected by C (default agreement aside); if not, it is a raising (or ECM) infinitival, lacking φ-features and tense. So it makes sense to assume that Agree- and Tense-features are inherited from C, the phase head. (Chomsky 2005: 9)

I argue that full subject Agreement is a morphological realization of the syntactic T-Subject Agree relation, and that AAE is a morphological realization of C-Wh-Phrase(subject) syntactic Agree and inhibition of T-Subj Agree relation. Whether the wh-phrase moves overtly or remains in-situ, the same effects should obtain. Overt movement could be motivated by other factors such as the EPP. One will not need to appeal neither to Grohmann's Antilocality Condition, nor to grammatical feature deletion on chains.[2]

5.4 Anti-Agreement Effects: The Analysis

In this section I will argue that AAE arises as a result of C retaining its φ-features and establishing an Agree relation with the subject. Before we embark on detailing this analysis, let us remind ourselves of the definition of the Agree operation that we saw in Chapter 3 and repeated here in (37).

(37) **Agree**

The probe P agrees with the closest Matching goal in D.

a. Matching is feature identity.
b. D is the sister of P. [D= c-command Domain of P]
c. Locality reduces to closest c-command. (Chomsky 2000: 122)

Adopting this definition, let us take, for example, the wh-sentence from QTB repeated in (38).

(38) mani θaməttut$_i$ ag ʕlan argaz-nəs
which woman comp see.Part.PER man-her
"which woman saw her husband"

Given Chomsky's proposal that C transmits its φ-features to T, which I called **DONATE** in (9) and which is schematized in (39) below, I argue here that this cannot be how sentence in (38) is derived since it is a case of AAE.

(39) **[C [T [vP Subject [V]]]]**

DONATE **Agree**

φ-feature inheritance

If DONATE applies, the following will take place:

a. T will probe the wh-subject and agree with it; agree meaning the [-interpretable] φ-features on T are valued and the Case feature on the subject is also valued.
b. C, now bearing only [+interpretable] wh-feature, will not be active and the subject, which is still active by virtue of bearing a [-interpretable] wh-feature will not get this feature checked.

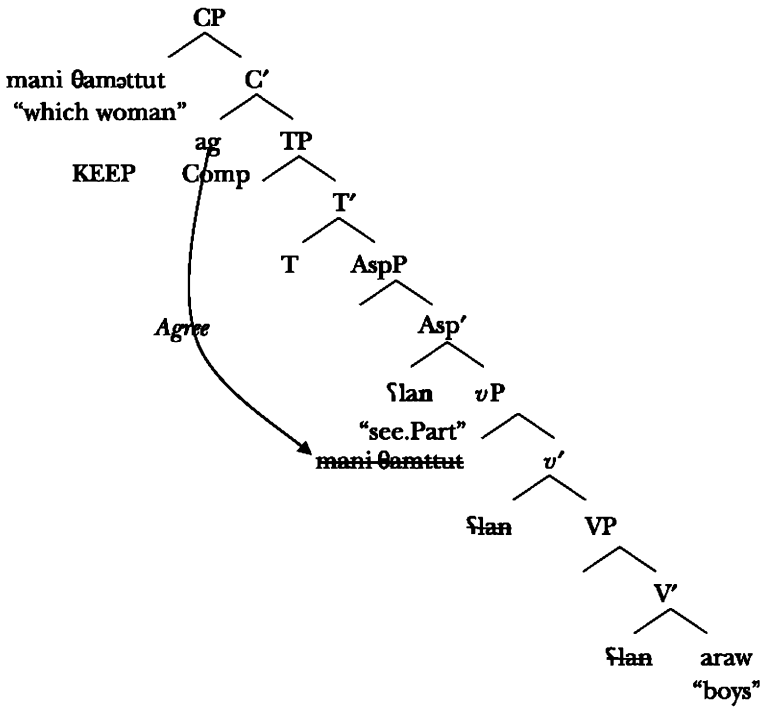
Notice that the Numeration is now exhausted and there is no **hope** for the wh-subject to get its wh-feature valued and the ultimate destination would be "crash." I assume then that there is a second option and that is: C does not transmit its φ-features to T, in for example wh-clauses, for the reasons mentioned in (a) and (b). Descriptively, AAE seems to be a repair strategy that results from enabling C to probe the wh-word and Agree with it. How does that take place at the feature level? When C is merged it does not transmit its [-interpretable] φ-features to T, and therefore remains active. T bears [+interpretable] tense features and since it does not receive the [-interpretable] φ-features it will remain inactive. The wh-subject bears valued [+interpretable] φ-features, unvalued [-interpretable] Case, and [-interpretable] wh-feature. Principles of minimal search will force C to search for the closest goal, which is the active subject. As a result of Agree the φ-features on C are valued and the wh-feature on the subject is also valued. The question arises if the φ-features on T are "suppressed" how does the Case feature on the DP get valued and

deleted?[9] There is a good reason here to assume that this happens as a result of Agree with the φ-complete C. Since according to Chomsky (2000, 2004), Case valuation is a reflex of a Match relation and Agree between the φ-complete T and the DP, there is absolutely nothing that would prevent the same to happen when a φ-complete C probes a subject DP. Let us call this second option that I just laid out **KEEP**:

(40) **KEEP**
NO φ-feature Transfer from C to T.

As a result of KEEP we expect not to have "T-agreement," that is, no agreement between T and the subject, hence the so-called AAE is deduced. The syntactic representation in (41) illustrates the derivation of the sentence in (38) with the application of KEEP:

(41)



As first noted in Ouhalla (1993) and discussed in Ouali and Pires (2005), the AAE disappears in Berber when the subject is long-distance extracted; that is, when it is extracted from an embedded clause to the front of a

matrix clause. If we look at (42), we see that the subject is in post-verbal position and the verb is inflected for full agreement.

(42) **y**dda ʕli
leave.IMP.**3sm** ali
"Ali left"

On the other hand, in (43), a Cleft-construction where the subject is in pre-verbal position, we see that the verb shows AAE.

(43) ʕli ag dda**n**
Ali Comp leave.IMP.Part
"It was Ali that left"

In (44) the subject is extracted from the embedded clause all the way to the front of the matrix clause and as we can see only full subject-verb agreement is allowed on the embedded verb.

(44) ʕli ay θənna Məryəm ___ yədda / * da**n**
Ali Comp say.PER.3sf Miriam ___ leave.PER.3sm /* leave.IMP.**Part**
"It was Ali that Miriam said left"

The same question that was raised before is again raised here about how an agreement theory could reconcile these facts. The next section will try to do just that.

5.5 Evading Agreement Suppression Effect

As noted in the previous section, when the subject is long-distance extracted, full subject-verb agreement must occur as illustrated in (44) and the wh-question in (45).

(45) ma ag inna ʕli θəʕla (*ʕla**n**) araw
who Comp 3ms.say.PER Ali 3sf.see.PER (*see.Part) boys
"Who did Ali say saw the boys"

Let us examine the derivation of the sentence above CP phase by CP phase.

(46) ma ag inna ʕli [$_{CP}$ ~~ma~~ C [T [θəʕla [*v*P ~~ma~~ ~~θəʕla~~ araw

φ-Feature Transfer

Agree

Who Comp 3sm.say.PER ali who 3sf.see.PER who ~~3sf.saw.PER~~ boys

By virtue of DONATE repeated in (47) (first option available), the embedded C, which does not bear a wh-feature, transfers its φ-features to T and T then agrees with the wh-subject.

(47) **DONATE**
Transfer φ-features from C to T without keeping a copy.

Up to this point the [-interpretable] wh-feature on the subject has not been valued yet. Does the derivation crash? The answer is no because the Numeration has not been exhausted yet which therefore means that there still is hope for the wh-subject. At the embedded CP level we get "T-agreement," hence full subject-verb agreement, and now the wh-subject moves the intermediate Spec, CP. Let us then examine what happens at the matrix CP level.

(48) [CP ma [C ag [T [inna [*v*P ʕli ~~inna~~ [$_{CP}$ ~~ma~~ θəʕla [*v*P ~~ma~~ ~~θəʕla~~ araw

Φ-Feature Transfer

Agree

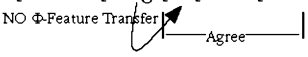
Who Comp 3sm.say.PER ali ~~3sm.say.PER~~ who 3sf.see.PER who ~~3sf.saw.PER~~ boys

The first available option is DONATE by which the matrix C, which bears a [+interpretable] wh-feature, transfers its φ-features to T as represented in (48). Remember that at this point we have not valued the wh-feature of the wh-word yet. When C transfers its φ-features to T it will not remain active and consequently it will not act as probe and Agree with the subject. The Numeration has been exhausted, and there remains no hope for the subject yielding a fatal crash. Now there is no other solution but to try KEEP, repeated in (49).

(49) **KEEP**
NO φ-feature Transfer from C to T.

Given KEEP the matrix C retains its φ-features, and therefore is active. Minimal search forces C to search for the closest goal which is the matrix subject. Even though C bears a wh-feature, this feature, as we established before, is valued and [+interpretable], which means Agree with the matrix subject would go through; C gets its φ-features valued and the matrix subject gets its Case feature valued. Now C is inactivated and will **NOT** probe the active embedded wh-subject which is in the intermediate Spec, CP. Here again the Numeration is exhausted, no hope remains for the subject, and the derivation faces a fatal crash.

(50) [CP ma [C ag [T [inna [*v*P ʕli ~~inna~~ [$_{CP}$ ~~ma~~ θəʕla [*v*P ~~ma~~ ~~θəʕla~~ araw]]]]]]]

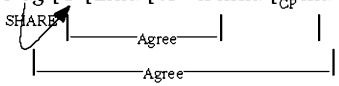


Only at this stage, and as a **Last Resort** do we invoke a third option, namely SHARE, which I formulate as follows:

(51) **SHARE**
Transfer φ-features from C to T and keep a copy.

Since this is a last resort option, the derivation up to the embedded CP (lower CP phase) proceeds as explained in (46) appealing to DONATE, because the Numeration at the point of the intermediate CP is not exhausted and there is still hope for the subject. As we reach the matrix CP, and as we just saw we exhausted both DONATE and KEEP, and our last hope is SHARE. Let us examine how SHARE operates.

(52) [CP ma [C ag [T [inna [*v*P ʕli ~~inna~~ [$_{CP}$ ~~ma~~ θəʕla [*v*P ~~ma~~ ~~θəʕla~~ araw]]]]]]]



The matrix C, which bears a [+interpretable] wh-feature, transfers its [-interpretable] φ-features to T and keeps a copy of these features. As a result, both C and T are now active probes. Minimal search enables T to find the closest active DP, namely the matrix subject. Agree takes place, now both matrix T and matrix subject are inactive and "T-agreement" is obtained. C, still active, probes the closest active DP, which is the embedded

wh-subject in intermediate Spec, CP. Again, Agree takes place, the φ-features on C are valued as well as the wh-feature on the wh-subject. Now the derivation converges.

Let us now recapitulate the analysis that I have proposed so far:

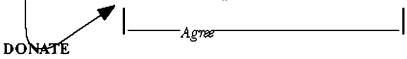
(53) a. If C does not bear a wh-feature, or any left-periphery feature, C transmits its φ-features to T by virtue of **DONATE**. This is the case in simple declarative sentences as in (54), represented in (55).

b. If C bears a wh-feature or a similar feature, appealing to **DONATE** and transferring the φ-features to T causes a fatal crash. As a repair strategy **KEEP** is invoked and C does not transfer its φ-features to T. This is the case in "local" wh-clauses, clefts and subject-relative clauses, hence AAE as in (56) represented in (57).

c. In long-distance extraction clauses, the embedded C does not bear a wh-feature or a similar feature, and transmits its φ-features to T, hence the evasion of AAE as shown in (58) and represented in (59). Matrix C however can make use of neither **DONATE** nor **KEEP**, for the reasons explained in detail above. As a last resort we appeal to **SHARE** and this is the case in (58) and (59).

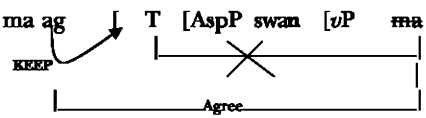
(54) iswa ʕli aman
3sm.drink.PER Ali water
"Ali drank water"

(55) [C [T [AspP iswa [*v*P ʕli ~~iswa~~ [VP ~~iswa~~ aman]]]]]



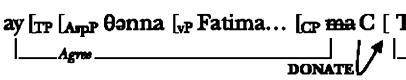
(56) ma ag swan aman
who Comp drink.PER.Part(AAE) water
"Who drank water?"

(57) [CP ma ag [T [AspP ~~ma~~ swan [*v*P ~~ma~~ ~~swan~~ [VP ~~swan~~ aman]]]]]



(58) ma ay θənna Fatima iswa aman
who Comp 3sf.say.PER Fatima 3sm.drink.PER water
"Who did Fatima say drank water?"

(59) [CP ma ay [TP [AspP θənna [vP Fatima... [CP ~~ma~~ C [T [Asp iswa [vP ~~ma~~ ...aman]]]]]]



This analysis makes the prediction that an "agreeing" C that is, a C that does not transmit its φ-features to T, should be different from a non-agreeing C that is, a C that transmits its φ-features to T. This is exactly what we observe in Tamazight Berber and in Berber in general. In local wh-extraction contexts such as (60) (a case of "agreeing" C) Comp is obligatory otherwise the sentence becomes ungrammatical as in (61):

(60) ma **ag** swan aman
who **Comp** drink.PER.Part water
"Who drank water?"

(61) *ma swan aman
who drink.PER.Part water
"Who drank water?"

In long-distance extraction, on the other hand, Comp is disallowed in the embedded clause (a case of non-agreeing C) as illustrated by (62) and (63). This, I argue, is a strong empirical evidence for C-agreement or lack thereof. In other words, my proposal shows how C-agreement is disallowed when T-agreement (subject-verb agreement) is allowed and how C-agreement (also represented by an overt C) is allowed where T-agreement is disallowed.

(62) ma ay θənna Fatima iswa aman
who Comp 3sf.say.PER Fatima 3sm.drink.PER water
"Who did Fatima say drank water?"

(63) *ma ay θənna Fatima **ay** iswa aman
who Comp 3sf.say.PER Fatima **Comp** 3sm.drink.PER water
"Who did Fatima say drank water?"

Another interesting prediction is that in long-distance extraction contexts, given my proposal that matrix C transfers its φ-features to T and keeps a copy (SHARE), we expect to see both "T-agreement" and "C-agreement" when this happens in the matrix domain. This prediction is borne out as we see in (62) repeated in (64):

(64) ma **ay** θənna Fatima iswa aman
who **Comp** **3sf**.say.PER Fatima 3sm.drink.PER water
"Who did Fatima say drank water?"

If we drop "T-agreement" we get an ungrammatical sentence as we see in (65).

(65) *ma ag nan Fatima iswa aman
who Comp say.PER.Part Fatima 3sm.drink.PER water
"Who did Fatima say drank water?"

Also, if we drop "C-agreement" (represented by the overt C) we get, again, an ungrammatical sentence as in (66):

(66) *ma θənna Fatima iswa aman
who 3sf.say.PER Fatima 3sm.drink.PER water
"Who did Fatima say drank water?"

Similarly, we expect to see both T-agreement and C-agreement in Object extraction contexts in Berber, since T will agree with the subject and C will agree with, for example, a wh-object. In other words we expect SHARE to be the only convergent option and to observe both subject-verb agreement and an obligatory Comp. These predictions are borne out as shown in (67), (68), and (69).

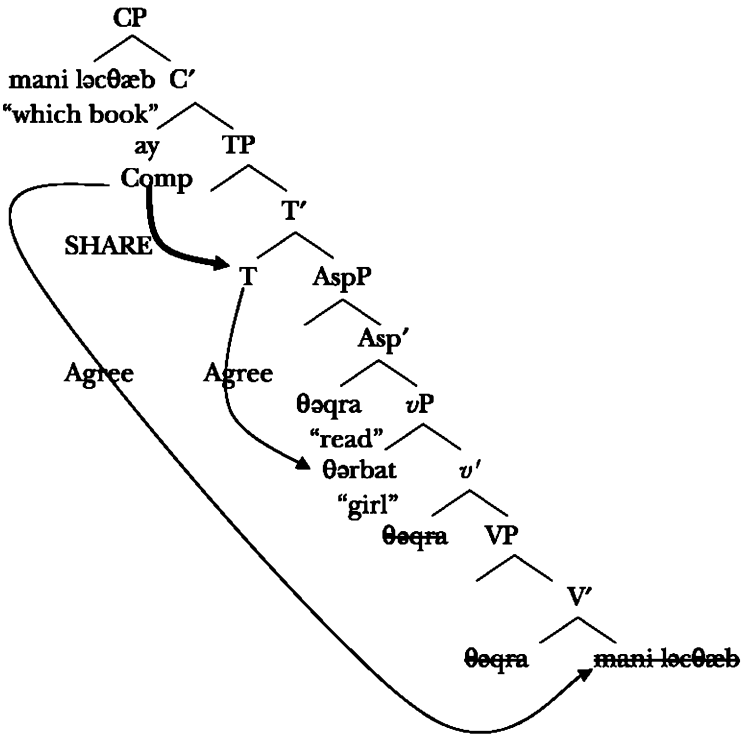
(67) mani ləcθæb *(ay) **θ**əqra θərbat
which book *(Comp) **3sf**.read.PER girl
"Which book did the girl read?"

(68) ləcθæb-a *(ay) **θ**əqra θərbat
book-this *(Comp) **3sf**.read.PER girl
"It was this book that the girl read"

(69) ləcθæb *(ay) **θ**əqra θərbat ur-iɣuða
book-this *(Comp) **3sf**.read.PER girl Neg-3sm.good
"The book that the girl read is not good"

The example in (67) is an object wh-question, (68) is an object Cleft-construction and (69) is an object relative clause. As shown in all these cases Comp or C-Agreement is obligatory as expected if we consider the derivation of (67) represented in (70) below.

(70)



As shown in (70), we have a case of SHARE. Before we detail the analysis let us ask the question of what happens if we apply DONATE and KEEP? If DONATE applies C will transfer its φ-features to T, and C will cease to be active. T will probe the subject and T-agreement will be achieved, yet the [-valued] [-interpretable] wh-feature on the object will not be valued and deleted and the derivation will ultimately crash. If, on the other hand KEEP applies, C will not transfer its φ-features to T, which means it will remain active and probe the closest active DP. The subject in Spec-*v*P is the closest goal to C, and since C is φ-complete it will agree with the subject and value its Case; the φ-features on C should conversely get valued and deleted. The same problem arises again here and that is the wh-feature on the wh-object will fail to get valued and deleted and the derivation will yet again crash. With SHARE, the derivation proceeds as follows: C transfers its φ-features to T and keeps a copy. C and T are both active; T probes the closest goal that is, the subject, and as a result T-agreement is

obtained as marked by the subject-verb agreement, and C probes the closest active DP which is now the wh-object, since the subject has been inactivated by T. C-agreement is then obtained as marked by the obligatory Comp. This is another compelling evidence for the different φ-Transfer options that I have discussed so far namely: DONATE, KEEP, and SHARE. Another prediction this analysis makes is C-agreement should arise when we have wh-adjuncts, this prediction is borne out and will be discussed in the next section.

5.6 Object Arguments, Adjuncts, and AAE

As demonstrated in the last section, C-agreement, which is marked by an obligatory Comp, in Tamazight Berber, and in Berber in general, is manifested in subject wh-clauses, subject relative clauses and subject Cleft-constructions, as a result of KEEP in short-distance movement, and SHARE in long-distance movement, as schematized in (71):

(71) a. [CP wh-Subj $C_{\{wh,\ \varphi\text{-features}\}}$ [TP T [*v*P ~~wh-Subj~~ .]]] (AAE)
KEEP — Agree

b. [CP wh-Subj $C_{\{wh,\ \varphi\text{-features}\}}$ . . [CP ~~wh-Subj~~ [TP T [*v*P ~~wh-Subj~~ . . .]]]
SHARE — Agree
(AAE)

In detailing this analysis, the discussion for the most part has been restricted to extracted subjects. The question we address now is does C-agreement arise, as predicted, when the lexical item, targeted for extraction in a wh-clause, a relative clause, or a cleft, is a direct object, an indirect object or an adjunct? Regarding the internal arguments, I will limit the discussion here to direct objects.

5.6.1 Direct object extraction

The verb in Berber does not inflect for object-verb agreement. As illustrated by the example from QTB in (72) the verb is morphologically marked for only subject agreement.

(72) iswa ʕli aman
3sm.drink.PER Ali water
"Ali drank water"

Presumably the object still establishes an agreement relation with a functional head carrying φ-features and this head is *v* following Chomsky (2005).

(73) $[_{CP}\ [_{TP}\ [_{AspP}$ iswa $[_{vP}$ ʕli *v* [VP aman]]]]]
|——Agree——|

Lack of overt object-verb agreement explains why there is no AAE on the verb in object wh-clauses for example.

(74) ma ag iswa ʕli ~~ma~~
what Comp 3sm.drink.PER Ali ~~what~~
"what did Ali drink?"

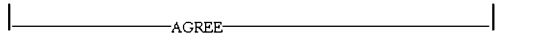
However and as predicted C-agreement is overtly marked by the obligatory Comp. The wh-word gets its Case feature values as result of an agreement relation with *v*, yet it still remains active since it bears an uninterpretable wh-feature. Notice that KEEP cannot apply because there will not be a T-agreement and the subject will not get its Case valued. If DONATE applies C will not have any φ-features that will make it active and therefore target the wh-object, hence the derivation will crash as illustrated by the example in (75) presented in (76):

(75) *ma iswa ʕli ~~ma~~
what 3sm.drink.PER Ali ~~what~~
"what did Ali drink?"

(76) $[_{CP}$ *ma C $[_{TP}$ T iswa $[_{vP}$ ʕli *v* ~~ma~~]]
|—DONATE—||——AGREE——| |——AGREE——|

Object wh-clauses such as (38) represent another clear case of SHARE where on one hand, T-agreement takes place between T and the subject, as marked morphologically on the verb, and on the other hand C-agreement takes place between C and the wh-object as marked by the obligatory Comp.

(77) [$_{CP}$ ma ag [$_{TP}$ T iswa [$_{vP}$ ʕli v ~~ma~~]]



These effects are also attested with long-distance object extraction as shown in:

(78) ma ay θənna fatima iswa ʕli ~~ma~~
what Comp 3sf.say.PER Fatima 3sm.drink.PER Ali ~~what~~
"what did Fatima say Ali drank?"

5.6.2 Adjuncts

Wh-clauses with Adjunct wh-phrases also exhibit obligatory Comp which I have characterized as a morphological marker for C-agreement. This is illustrated in the examples (79) and (80):

(79) milmi ag idda ʕli ɣər rbað
when Comp 3sm.go.PER ali to Rabat
"When did Ali go to Rabat?"

(80) maca ag idda ʕli yðəlli
where Comp 3sm.go.PER ali yesterday
"Where did Ali go yesterday?"

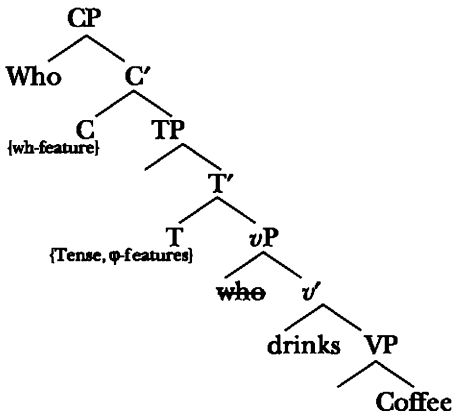
The derivation of these adjunct wh- clauses also involves the feature inheritance mechanism SHARE. By virtue of bearing both an interpretable [wh] feature and uninterpretable φ-features C is active and probes the wh-adjunct.

5.7 A Note on English Wh-Questions

Now we return to the big question we left un-answered regarding how we ever get wh-questions, such as (81) represented in (82), in English.

(81) Who drinks coffee?

(82)



Notice that DONATE (Transfer) is not going to help us here. If C transfers its φ-features to T, it will cease to be active hence it will not probe and value the wh-feature on the wh-subject. KEEP (No Transfer) however, seems to be a viable option. C retains its φ-features, remains active and enters into a Probe-Goal Match relation with the subject. C is φ-complete therefore should be able to value the Case feature on the DP. It should also be able to value the wh-feature on the subject. Although it looks like what we get in English subject wh-questions is "C-agreement," it may be morphologically similar to "T-agreement"; the reason why we do not observe the same effects we see in Tamazight Berber.

5.8 DONATE, KEEP and SHARE and Their Order of Application

We will now shift gears to a larger question regarding the order of application of DONATE, KEEP and SHARE. I pointed out at the beginning of this chapter that these operations are ordered in terms of principles of economy and minimal search. An alternative approach would be not to complicate the rule system by, what seems like, "stipulating" the ordering and to let some of the empirical burden fall on the bare-output conditions namely feature interpretability at the interfaces. The application of these operations would be "free" and only derivations that meet bare-output conditions will ultimately converge. Berber facts however provide evidence

for ordering of application of DONATE, SHARE and KEEP. This evidence comes mainly from the Anti-Agreement cases such as the example repeated in (83).

(83)	mani θaməttut	ag	ʕla-**n**	araw
	which woman	Comp	see.PER.Part	boys
	"Which woman saw the boys"			

If we consider the derivation of the sentence above we notice that both KEEP and SHARE should be convergent. Before I elaborate on this point recall that DONATE was not a viable option because if C does not keep φ-features it will eventually not value the wh-feature of the subject and the derivation will crash. What happens if KEEP applies? As I discussed in detail in the previous sections, C will have φ-features and will therefore be active, it will probe the closest active goal namely the wh-subject. C, by virtue of being φ-complete, will be able to value the Case feature of the latter, and since it is also specified for a wh-feature it will value the wh-feature on the subject. Alternatively, if SHARE applies both C and T will have φ-features, hence both will be active. T will probe the subject, being φ-complete, it will value the subject's Case feature and will get its own φ-features valued and deleted; as a result T-agreement should obtain. The wh-feature on the subject is however still unvalued and the subject therefore should still remain active and visible to the still active C. C should probe the subject, the φ-features on C should get valued and deleted and so does the wh-feature on the subject and as a result C-agreement should also obtain. As we can see both KEEP and SHARE are convergent options, but only KEEP is empirically attested as shown by (84) vs. (85).

(84)	mani θaməttut	ag	ʕla-**n**	araw
	which woman	Comp	see.PER.Part	boys
	"Which woman that saw the boys"			
(85)	*mani θaməttut	ag	θʕla	araw
	which woman	Comp	3sf.see.PER	boys
	"Which woman that saw the boys"			

As we can see, (84), where both C-agreement and T-agreement are marked, is ungrammatical, whereas (85), where only C-agreement is marked, is

grammatical. This may confirm that the ordering of DONATE, KEEP and SHARE follows naturally from principles of economy. In declarative sentences, C does not have any left-periphery feature and neither does the subject. DONATE seems to be, naturally, the first option given that T is closer to the subject than C. In wh-questions and other subject extraction cases, C possesses a left-periphery/"discourse" feature and so does the subject, it seems "natural" that applying KEEP, an operation, that requires only one Probe-Goal relation to value and delete all the uninterpretable features of both the subject and C, would be preferred over an operation, namely SHARE, that requires two Probe-Goal relations, hence two Agree operations, between two different probes that is, C and T and the same goal namely the subject. Also, it seems natural that SHARE only applies when T and C probe two different goals as is the case in long-distance extraction and in object wh/cleft/relative clauses. I therefore conclude that the ordering in (86) is both theoretically and empirically motivated:[4]

(86) DONATE > KEEP > SHARE

5.9 A Note on Agree vs. Move

Finally, the last point I would like to touch on has to do with Agree vs. Move. Agree applies upon establishing a C-Command Probe-Goal Match relation and it applies independently of Move. Move or internal merge is motivated by other independent mechanisms. For Chomsky, it is the EPP and for Epstein and Seely it is Case. At this point I have nothing more to add to this. The intermediate movement of the wh-word to the intermediate Spec, CP in sentences such as (58) represented in (59), is not forced by feature-checking, but rather by other mechanisms for example, locality, as proposed by Boskovic (2002), or also as the result of the need for elements to move to the edge of the phase in order to check features in a higher projection later. The jury is still out on which of these different approaches is on the right track, although approaches that try to do away with stipulative mechanisms such as the EPP seem to be favorable on Minimalist grounds. The next chapter is about the clitic distribution in Tamazight Berber.

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Chapter 6

Object Pronominal Clitics

Pronominal clitic distribution is one of the most debated topics in syntax and remains one of the most interesting phenomena in Berber syntax. One of the recent and widely accepted proposals in the Berber syntax literature claims that clitic placement results from XP-movement (phrasal-movement) to the edge of *v*P prior to any further movements. This proposal was first made by Boukhris (1998) and was adopted in Ennaji and Sadiqi (2002). I provide evidence and analysis indicating that this proposal is both theoretically and empirically inadequate. I will argue that object pronominal "clitic placement" is not the result of phrase-movement as proposed by the authors mentioned above, nor is it head movement, either from an argument position that is, object position as proposed by Ouhalla (1988, 1989, and 2005a) or from a higher functional head position (Elouazizi 2005). I argue that one can maintain Sportiche's (1992, 1998) proposal, also argued for in Manzini (1998) and Manzini and Savoia (1999, 2001, 2002) among many others, which hypothesizes that object pronominal clitics are merged as specialized heads in the functional domain and show given, the Berber data that clitic placement can be deduced from whether V-to-T takes place or not without appealing to clitic movement or prosodic operations such as prosodic reordering (Ouhalla 2005a). I will also argue that the parametric variation among some Berber dialects with regard to object clitic distribution is due to their difference in the hierarchy of the functional categories. This chapter is organized as follows: Section 6.1 introduces the facts about the distribution of object pronominal clitics in Tamazight Berber, section 6.2 discusses previous analyses of pronominal clitic distribution, section 6.3 presents a new analysis of pronominal clitic distribution in Tamazight Berber and section 6.4 provides an account for the variation in the clitic placement in some Berber dialects.

6.1 The Distribution of Object Pronominal Clitics in Tamazight

Tamazight object pronominal clitics must cliticize to the verb if there are no functional categories in the sentence as shown in (1). In the presence of functional categories, the clitics must cliticize to these categories, namely: the tense elements *da* as in (2) and *la* as in (3), the negation particle *ur* as in (4), and the complementizer *ay* as shown in (5).

(1) wʃix-***as-t*** (Quebliyeen Tamazight Berber)
give.PER.1s-him-it
"I gave it to him"

(2) da-**as-t** wʃəx(*-**as-t**)
will-him-it give.1s.AOR(*-him-it)
"I will give it to him"

(3) la-**as-t** ikkix (*-**as-t**)
Pres-her-it give.1s.IMP(*-him-it)
"I am giving it to him"

(4) ur-**as-t** wʃix(*-**as-t**)
not-him-it gave.neg.1s.PER(*-him-it)
"I didn't give it to him."

(5) argaz a-**s-t** ywʃan(*-**as-t**) idda (a-**s-t** = **ay-as-t**)
man Comp-him-it give.PER.Part. (*-him-it) went
"The man who gave it to him left."

(6) ma a-**s-t** ywʃan(*-**as-t**)?
who Comp-him-it gave.Part.(*-him-it)
"Who gave it to him?"

Examples (2)–(6) indicate that when a particle representing a functional category co-occurs with the verb, pronominal clitics cliticize to these particles and not to the verb. In (2) the dative and the accusative clitics are attached to the future particle *da* and not to the verb as shown by the ungrammaticality of (7). In (4) they appear attached to the negation particle *ur* and not to the verb, otherwise the sentence is ill-formed as in (8). Finally in (5) and (6), they obligatorily attach to the complementizer and not the verb as shown in (9).

(7) *da wʃəx-**as-t**
will give.AOR.1s-him-it
"I will give it to him"

(8) *ur wʃix-**as-t**
Neg give.neg.PER.1s-him-it
"I didn't give it to him"

(9) *argaz ay wʃa-**as-t** idda
man Comp give.PER.1s-him-it left

However, when all these particles and the complementizer *ay* co-occur in the same clause in Tamazight, clitics attach to the tense particle (e.g. *da* "Fut" in (10)–(11)) and only to the tense particle:

(10) argaz ay -ur -da -**s -t** ywʃən idda[1]
the man Comp-not-will-him-it 3sm.give.Part went.3sm.PER
"The man who will not give it to him has left"

(11) ma ay-ur-da-**as-t** ywʃən?
who that-not-will-him-it 3sm.give.Part
"Who will not give it to him"

(12) * argaz ay-(***as-t**)-ur-(***as-t**-)da ywʃən
the-man that-(him-it)-Not-him-it-will give.Part

(13) ma ay(***as-t**)-ur-(***as-t**-)da ywʃən
who that (-him-it)-not-him-it-will give.Part

In (10) and (11) where all the different potential hosts co-occur, namely: comp (*ay*), Neg particle (*ur*), tense particle (*da*), object clitics can attach only to the tense particle otherwise we get ungrammatical sentences as shown in (12) and (13). The distribution of Tamazight object pronominal clitics can thus be schematized as follows:

(14) ***Object pronominal Clitic Distribution***
a. V + **CL**
b. Tense Particle + **CL** + V
c. Neg + **CL** + V
d. Comp + **CL** + V
e. Comp (+ ***CL**) + Neg (+ ***CL**) + Tense (+ **CL**) + V (+ ***CL**)
f. Comp (+ ***CL**) + Neg (+ **CL**) + V (+ ***CL**)

In Brief

g. F CL V (where F= Comp, Neg or T) (borrowing Ouhalla's (2005a) notation)

h. V CL

The descriptive generalizations in (14) are true of all Berber dialects except for line (e) which distinguishes two sets of dialects: the Tamazight-like dialects and the Tarifit-like dialects. In the Tarifit like dialects only the following order is grammatical:

i. Comp (+ ***CL**) + Tense (+ ***CL**) + Neg (+ **CL**) + V (+ ***CL**)

What sets Tamazight-like dialects from Tarifit-like dialects apart is that in the latter, when more than one potential host is present in the sentence, the clitics cliticize to negation, which happens to follow the tense auxiliary in these dialects. I will return to this topic in section 6.4 but first I will discuss some different approaches to cliticization and the one which the Tamazight data favors.

6.2 Cliticization vs. Affixation, and Head-Adjunction vs. Merging Hypotheses

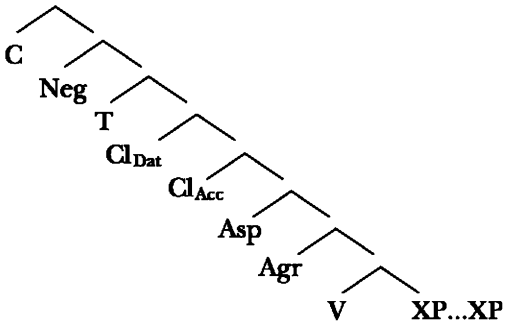
6.2.1 Clitic projections: A fixed positions for immobile clitics

As mentioned before, Tamazight clitics always immediately follow their host, that is, they are enclitics. The order of clitics in a clitic cluster is rigid, in the sense that the dative clitic always occurs before the accusative. This rigidity is compatible with Sportiche (1998) in which functional hierarchies in the sentence are rigidly fixed.

I assume that the sentence structure in Tamazight is headed by Neg in negative sentences. I also assume that all tense particles are generated in a T° head. In addition, I will assume that clitics are merged under specialized functional heads projected in the functional domain (Sportiche (1998) Manzini (1998) and Manzini and Savoia (1999, 2001, 2002), see also Ouali (1999) for Tamazight Berber and Elouazizi (2005) for Tarifit). Unlike Ouhalla (1988, 1991, 2003), Boukhris (1998) and Ennaji and Sadiqi (2002) I assume that object pronominal clitics are not base generated in argument position (i.e. in the object positions inside VP) and do not

adjoin to their host either in narrow syntax (Ouhalla 1988) or at PF (Boukhris 1998). The following is the phrase structure showing the clitic projections:

(15)



(Ouali 1999)

As mentioned before, Tamazight clitics always follow their host. That is, they have to appear to the right of whatever element they are cliticized to. The order of clitics in a clitic cluster is rigid, in the sense that the dative clitic always occurs before the accusative. This rigidity is compatible with Sportiche (1998) in which functional hierarchies in the sentence are rigidly fixed.

6.2.2 Clitic placement in Tamazight is not head-to-head adjunction

Given the phrase structure analysis proposed in (15), how can we account for clitic placement in the constructions in (16) through (19)?

(16) wʃix-**as-t**
give.PER.1s-him-it
"I gave it to him"

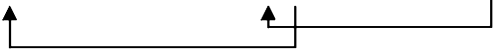
(17) da-**as-t** wʃəx
Fut-him-it give.AOR.1s
"I will give to him"

(18) la-**as-t** ikkix
Pres-him-it give.IMP.1s
"I am giving it to him"

(19) arba ay-**as-t** iwʃan
boy that-him-it give.PER.Part
"It was a boy who gave it to him"

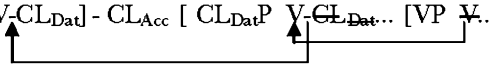
One way we could try to derive the clitic constructions, in such cases, is by head-to-head adjunction. Starting with (16), we can say that given the structure in (15), the verb moves to CL_{Acc} and the complex $V+CL_{Acc}$ then moves to CL_{Dat} as shown in example (20):

(20) ...[CL_{Dat}P [V-CL_{Acc}] + CL_{Dat} [CL_{Acc}P ~~V-CL_{Acc}~~ ...[VP ~~V~~ ...



However, this results in the wrong order, in which the accusative clitic precedes the dative clitic as (20) contrary to fact. We could overcome this problem by assuming that CL_{Acc}P is base-generated higher than CL_{Dat}P.

(21) ...[CL_{Acc}P [V-CL_{Dat}] - CL_{Acc} [CL_{Dat}P V-~~CL_{Dat}~~ ... [VP ~~V~~ ...



This would account for cases where clitics appear to be attached to the verb as in (16) since the verb would pick up the dative clitic first as in (21). But problems arise when we consider cases where clitics appear attached to other elements like Neg, Tense particle or Comp as in (17), (18) and (19), because nothing would enforce an order different from the ungrammatical CL_{Acc}-CL_{Dat}. One possible way to account for these cases is to left-adjoin CL_{Dat} up to CL_{Acc} and then right-adjoin the clitic complex to whatever higher head is locally available, otherwise we will not end up with the right order, say Comp+CL_{Dat}+CL_{Acc}. But given Kayne's (1994), widely accepted, restrictive theory assumed here, right-adjunction is not allowed. As discussed in the next section, similar ordering problems also arise if one assumes that clitics move from argument positions (via head movement as argued in Ouhalla (1988, 1989 and 2005a) for Berber and Kayne (1989b) for Romance).[2]

6.2.3 Ouhalla (2005a)

Ouhalla (2005a) observes that the distribution of object pronominal clitics in Berber, despite some dialectal variations, follows the generalizations in (22) and (23):

(22) CL is attracted to (the preverbal position) by functional categories.
(Ouhalla 2005a: 609)

(23) CL cannot be the first head constituent in the minimal domain (CP, DP, or PP) that includes it.
(Ouhalla 2005a: 619)

Ouhalla writes:

> The statements in (2) and (3) [my examples (22) and (23) H.O.] together confirm the long standing view that CL placement is determined by factors that are partly syntactic and partly prosodic (see Klavans 1980, 1985). Attraction to or by functional categories is a property of movement at the syntactic level in general, which in Minimalism (Chomsky 1995), for example, is accounted for in terms feature matching and deletion within local domains (Spec-head, or Head-adjunction relations). The prosodic aspect of the distribution of clitics follows, arguably inevitably, from the fact that CL elements are not prosodic constituents. As such, they are required to be associated with a neighboring overt category that is capable of serving as a prosodic host for them prosodic association of clitics may, in a well-defined set of contexts, involve a local reordering rule that affects CL and its host, called here CL-Host Inversion (CL-H Inversion). (2005a: 609)

This in a way sums up the gist of Ouhalla's proposal. The pronominal clitics, which are base generated as arguments inside VP, head-move to a functional head and this movement is syntactic as required by (22). If the movement of the clitic results in it being the first head constituent in its minimal domain, then it has to undergo a CL-H Inversion with a phonologically overt head as required by (23). For example to derive sentences like (24) which involves null tense Ouhalla proposes the structures in (25).

(24) wʃix-as ləcθaab
give.PER.1s-him book
"I gave him the book"

(25) a. [FP F [XP V CL .
b. [FP [[CL] $F_{ø}$] [XP V (Left-adjunction of CL to $F_{ø}$)
c. [FP [[V] =CL] $F_{ø}$ [XP (CL-V Inversion)
(Ouhalla 2005a: 620)

The movement of the clitic in (b) is syntactic whereas the inversion in (c) is phonological. The prosodic inversion is well motivated, whereas the syntactic movement of the clitic to F° is not, a point I will revisit later. When the F is phonologically overt then the derivation of the clitic placement is slightly different. For example the derivation of the example in (26) is shown in (27):

(26) ur **=tn** tjj diha!
Neg =them$_{ACC}$ leave there
"Don't leave them there!"

(27) a. [FP F [XP V CL .
b. [FP [[CL] F] [XP V (Left-adjunction of CL to $F_{\varnothing}$)
c. [FP [[F] [=CL] [XP V (CL-F Inversion)
(Ouhalla 2005a: 620)

Ouhalla (2005a: 621) states that "it is clear from example [(26)] that Neg attracts CL, which is trivially consistent with generalization [(22)]." Ouhalla extends the same analysis to cases where the clitic is attached to an overt tense marker (T = CL V), where the clitic is attracted by T. The enclisis is later derived at PF via the CL-H Inversion. There are two problems confronting this analysis. The first problem is that the attracting heads have no features in common with the clitics they attract. A featural motivation for the clitic movement has to be defined for it to be syntactic.

The second problem is that the clitics in this analysis move as heads from argument positions but it is not clear how the movement takes place when we have clitic clusters in double object constructions, a non-trivial question I believe. A way to avoid these problems is to hypothesize that the clitics do not move but are merged in their surface position and that their surface position is deducible from whether the independently motivated V-to-T takes place or not. I will propose just such analysis in section 6.2.5 where I argue that clitic movement is merely an illusion.

An analysis that also assumes that clitic movement is syntactic was proposed by Boukhris (1998), which I will review next.

6.2.4 Against XP-movement of object clitics

Boukhris (1998) (adopted by Ennaji and Sadiqi (2002)) assumes that CL-placement is derived by application of a syntactic rule that moves the clitics to the left edge of *v*P and from there they attach to their host, be it a verb

(in *v*) via "prosodic reordering," or a higher functional head (T, NEG, COMP). I will show that this analysis is not accurate and under-generates some very basic facts.

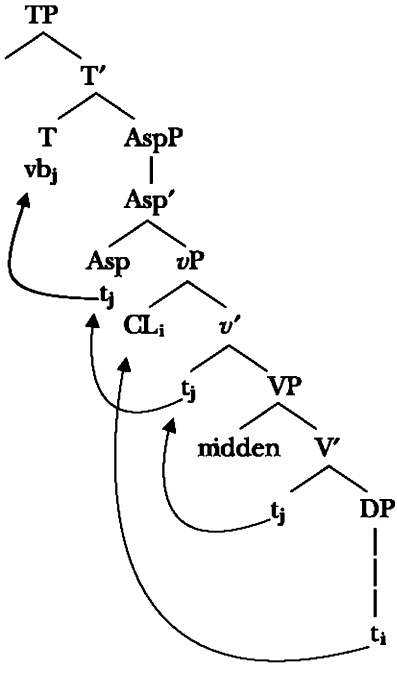
Following Belletti (1993), Boukhris (1998) assumes that object clitics are D heads of object DP's. These DP's are merged as V complements and their heads, that is, D's, do not themselves select NP complements. Boukhris assumes the following structure:

(28) DP
|
D
|
CL (Boukhris 1998: 301)

She first offers an analysis of enclitics as in (29) and argues that their derivation proceeds as shown in (30):

(29) Cla- n- *tn* middn
See.PER-3p- CL_{Acc} people
"People saw them"

(30)



(Boukhris 1998: 308)

The verb first moves to *v* to check its "V features", then to Asp and then to T which is marked for [-Future]. The clitic moves to Spec, *v*P skipping over the subject. This is allowed because she appeals to the notions of equidistance and minimal domain proposed in Chomsky (1995). When the verb moves to *v*, it creates a *v*P minimal domain, and consequently both the subject, which is base-generated in Spec, VP, and the clitic which is in the complement position of V, become equidistant to Spec, *v*P. To derive cases like (31) where the clitic is cliticized to the tense marker *la*, which Boukhris claims is an aspect marker generated in Asp, she argues that the verb moves to *v* and that *la* moves up to T, and the clitic moves to the Spec, *v*P which derives the order: La-CL Verb, as shown in (32).

(31) la- tn- ucllu- x (Boukhris 1998: 321)
Pres- CLAcc see.IMP- 1sg
"I see them"

(32) [$_{TP\ T}$ la [$_{AspP\ Asp}$ ~~la~~ [$_{vP}$ tn ucllux [$_{VP}$ ~~ucllux~~ [DP ~~tn~~]]]]]
(a labeled-bracket representation of the syntactic tree in Boukhris 1998: 325)

There are a number of arguments that show that *la* is a tense marker rather than an aspect marker.[3] But let us assume that Boukhris is right that *la*, being an aspect marker, moves from Asp to T, which explains the fact that the clitics appear attached to it. To derive the cases where the clitics attach to the future tense particle as in (33), Boukhris argues that the verb in the aorist form is not specified for aspect therefore does not need to check its aspect feature. AspP is not projected in the structure and the verb moves only to *v* and the clitic moves to Spec, *v*P. *ad* is base-generated in T, hence the order ad-CL V.

(33) ad-tn clu-x
Fut-cl.acc3p see.AOR.1sg
"I will see them" (Boukhris 1998: 329)

(34) [$_{TP\ T}$ ad [$_{vP}$ tn clux [$_{VP}$ ~~clux~~ [$_{DP}$ ~~tn~~]]]]]

Boukhris then notes that negation could combine with a verb in the perfective form, a form that she has argued moves all the way to T through Asp. She then raises the question of how to account for a case like (35):

(35) ur- tn ʕlix
Neg cl.acc3p see.PER.1s
"I didn't see them"

Boukhris notes that surprisingly the clitic is cliticized to Neg and not to the verb which has moved to T as represented in (36).

(36) *[NegP ur [TP clix [AspP ~~ʕlix~~ [vP **tn** ~~ʕlix~~ [VP ~~ʕlix~~ [DP **tn**]]]]]
Neg see.PER.1s ~~see.PER.1s~~ **CL** ~~see.PER.1s~~ ~~see.PER.1s~~ ~~CL~~

To solve the problem Boukhris then stipulates the following:

After the verb moves up to T, the clitic moves up to Spec, *v*P and subsequently to Spec, TP. It moves to Spec, *v*P to check its Case. Why does it move to Spec, TP? This is where the analysis seems to be less clearly argued. Boukhris stipulates, following Guéron 1995, that the clitic has to move to Spec, TP to check T's person feature. She extends the same analysis to cases where the clitic cliticizes to C as in (37):

(37) Is- nt clix (Boukhris 1998: 337)
Comp- CLacc3p seePER.1s
"did I see them?"

However, why doesn't the clitic move to Spec, TP in all other cases like: V-CL and *ad*-CL V, *la*-CL V? Boukhris's answer is that it is actually Neg or C that attracts the clitic to Spec, TP in (35) and (37). Following Zanuttini Neg selects T, and following Guéron (1995) C selects T. But when neither C nor Neg are projected then for Boukhris there is nothing that would attract the clitic to Spec, TP and therefore it stays in Spec, *v*P. How does T get its person feature checked when there is no higher head that would attract the clitic to its Spec? Boukhris's answer is that this could be satisfied by LF movement of the clitic to Spec, TP. One could assume that all these ad hoc stipulations are right and the central problem that Boukhris's analysis runs into is with simple sentences as in (38) represented in (39):

(38) ur iddi ʕli
Neg go.PER.neg.3s Ali
"Ali didn't leave"

(39) [NegP ur [TP iddi [AspP ~~iddi~~ [vP [VP ali V ~~iddi~~]]]]]

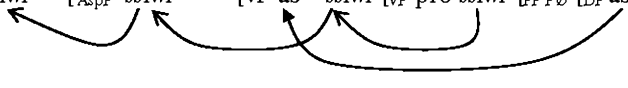
According to the analysis that Boukhris outlined, the Neg-head should attract any DP with a person feature to Spec, TP, a stipulation that is crucial to get the right order. One would expect the subject, the only DP in the structure with a person feature, to move to Spec, TP and end up preceding the verb. This prediction is not borne out:

(40) * ur ali iddi
Neg ali go.PER.neg.3s
"Ali didn't leave"

Switching to the dative clitic, which has the same distribution as the accusative clitic (see (14)), Boukhris argues, following Ouhalla (1988), that the dative clitic is a complement of a null preposition and this PP is merged as a complement of V as illustrated in (42). The distribution of the dative clitic is derived in the same manner as the accusative clitic. In other words, to derive the order V+CL_{Dat} as in (41) for example, V moves all the way to T, cyclically through *v* and Asp to check their strong V-features, and the dative clitic moves to Spec, *v*P as represented in (42).

(41) ssiwl- n- -as
talk.PER- 3pl- -CL.Dat.3sg
"They talked to him"

(42) [TP T ssiwl- [AspP ~~ssiwl~~ [vP **as** ~~ssiwl~~ [VP pro ~~ssiwl~~ [PP PØ [DP **as**]]]]]]



However, Boukhris's analysis runs into the same problems I stated above for the accusative clitic therefore, for considerations of space I will not repeat them here. One point that is worth mentioning here is that the movement of the dative clitic to Spec, *v*P is not due to Case, as is the case of the accusative clitic, since its case requirements can be satisfied inside the PP prior to its movement. Despite getting the right word order, the independent syntactic motivation for this movement remains mysterious. Note also that for Boukhris, clitic movement is syntactic and motivated by feature checking namely, Case in Spec, vP for the accusative, and a Person feature in Spec, TP for both the accusative and the dative. One could make a case by framing this analysis in Chomsky's

Derivation By Phase (DbP) (2000, 2001a) and argue that Spec, *v*P, being the edge of a phase, is an escape hatch for movement therefore the dative clitic moves to Spec, *v*P to be accessible to T and to be able to subsequently move to Spec, TP in negative sentences with the order: Neg-CL_{Dat} Verb. The serious problem that this analysis faces is that, since clitic movement is phrasal movement and is syntactic movement, nothing would prevent a full dative DP, or even accusative DP for that matter to move to Spec, TP in the same manner as clitics do as illustrated in (43) and (44). The phonological deficiency of the clitics is not relevant in the syntax.

(43) *ur ləcθaab uɣəx ____
Neg book buy.PER.1s ____
"I didn't buy the book"

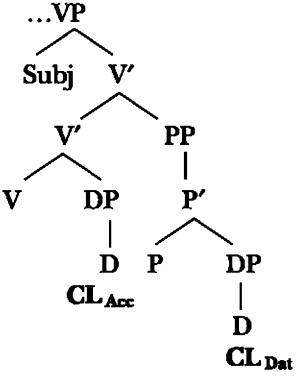
(44) *[$_{NegP}$ ur [TP ləcθaab [*v*P ~~ləcθaab~~ uɣəx [VP pro ~~uɣəx~~ [~~ləcθaab~~]]]]]

The last point that I want to raise regarding Boukhris's analysis concerns object clitic clusters in double object constructions as in (45):

(45) ur- as- t nn-i-n middn
Neg- CLdat3sg-CLacc3sm tell.AOR.3pl people
"People didn't tell it to him"

Boukhris proposes the following structure for double object clitic constructions:

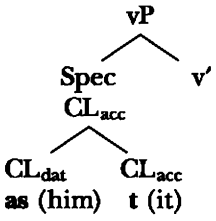
(46)



(Boukhris 1998: 387 with irrelevant details omitted)

The placement of the dative-accusative clitic cluster follows the same pattern schematized in (14) with the dative always preceding the accusative. Boukhris (1998) then argues that the cluster is derived in the same manner as when there is one individual object clitic in the sentence. The only difference is that in (46), to form a cluster the dative clitic has to adjoin to the accusative clitic before making any further movement if necessary. First the accusative clitic moves to Spec, *v*P and second the dative clitic moves and adjoins to it as illustrated in (47):

(47)



The movement of the accusative clitic to Spec, *v*P is motivated by Case, but the movement of the dative clitic in not motivated especially that both movements are syntactic. The adjunction therefore is itself unmotivated. The cluster moves to Spec, TP in negative clauses and clauses headed by C to check the person feature of T. The question is why is it that just one clitic especially the accusative, since it is structurally higher after moving to Spec, *v*P for Case, is not enough to satisfy this requirement?

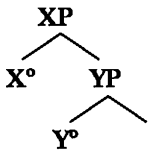
I therefore tentatively reject the hypothesis that clitics in Berber undergo XP-movement.

6.2.5 Merging hypothesis

Merging adjacent heads is an operation assumed to derive an affix attached to the stem. According to this theory, proposed by Halle and Marantz (1993, 1994), adjacent heads are merged in a zero level node while they still remain as separate terminals under this node. Under this analysis merging occurs at the post-syntactic level namely the morphological component.

According to this approach two heads X° and Y° can merge together if one heads the complement of the other as shown in (48):

(48)



Bobaljik adopts this theory and formulates a statement of adjacency as follows:

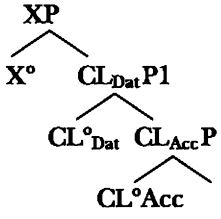
(49) *The adjacency condition (informal)*
In order for an affix and a stem to be combined, they must be adjacent.

(Bobaljik 1994: 2)

Bobaljik assumes that since affixation is a morphophonological condition, adjacency must be defined at (an intermediate stage in) the spell-out or interface between syntax and phonology, the level of morphology.

Let us assume then that clitic projections are in the order DatP-AccP as represented in the phrase structure below. And let us also assume, following Halle and Marantz (1993, 1994), that structurally adjacent heads can undergo a morphological *merging* process. This means that adjacent clitics can form a complex prosodic word with a higher head without having to undergo any sort of movement in the overt syntax as illustrated in (50):

(50)



This will enable us to generate a word order X-CLDat-CLAcc where clitics appear cliticized to X without any overt syntactic movement applying. I assume that the order of clitics with the elements they are attached to corresponds to the order of their syntactic heads in the sentential structure. A cluster like X°- CL°$_{Dat}$-CL°$_{Acc}$ corresponds to the structure in (50) assuming that nothing interrupts this order in the phonological component.

Cinque (1997) suggests that a similar operation takes place in forming complex verb forms in Bantu languages. The order of morphemes in the

complex verb in the example (51) corresponds to what is assumed to be the order of syntactic heads.

(51) n-kà-láá-boomba
1s-Fut-Prog-work ==> AgrS-Tense-Asp-Verb
"I will be working tomorrow"

Returning to the adjacency merging analysis we sketched, we will account for the constructions in (52)–(55):

(52) wʃix-**as-θn**
give.PER.1s-him-them
"I gave them to him"

(53) da-**as-θn** wʃəx
will-him-them give.PER.1s
"I will give them to him"

(54) ur-**as-θn** wʃix
Neg-them-it give.PER.neg.1s
"I didn't give it to them"

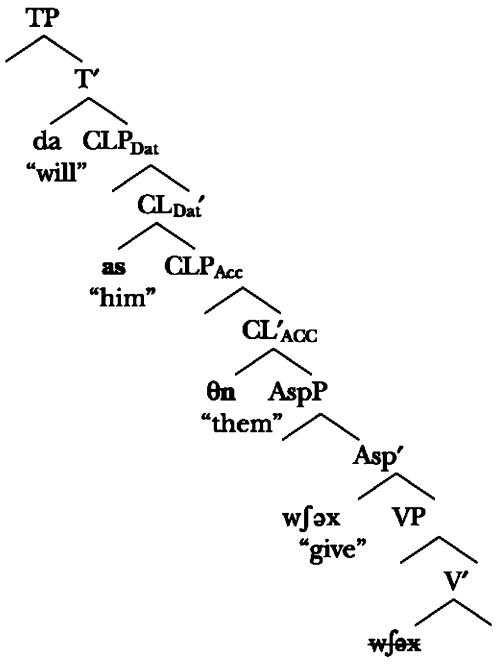
(55) arba ay-**as-θn** iwʃan .
boy that-him-them give.PER.Part
"The boy that gave them to him

In (52) the clitics are cliticized to the verb, in (53) they are cliticized to the future particle *da*, in (54) they are cliticized to the negation element *ur*, and in (55) they are cliticized to the complementizer. The analysis that I will propose is that the clitic distribution depends on whether the verb moves to T or not. If this movement takes place then clitics get phonologically cliticized to the verb, if it does not, they attach to any higher compatible host.

6.3 Verb Movement and Clitic Placement in Tamazight: Analysis

Let us start with the sentence in (53) where the clitics are cliticized or as formally defined in the previous section, morphologically merged with the tense element *da*. This sentence is represented in (56):

(56)



The verb moves from V to Asp to check its aspect features, this movement takes place in the syntax. The CL_{Dat} and CL_{Acc} are merged higher than Asp. The syntactic output then is:

(57) **da-CL_{Dat}-CL_{Acc} V**

Note that this conforms to the prosodic, cross-linguistically attested, requirement that the clitics cannot be in first position as proposed by Ouhalla (2005a) in (23) and as repeated in (58):

(58) CL cannot be the first head constituent in the minimal domain (CP, DP, or PP) that includes it. (Ouhalla 2005a: 619)

Let us now look at the example in (54). The object clitics are attached the negation element just as predicted since the verb moves to Asp^0 and the null tense cannot host the object clitics; however, since negation is the next higher phonologically overt head it acts as a host and as a result condition (58) is not violated as represented in (59).

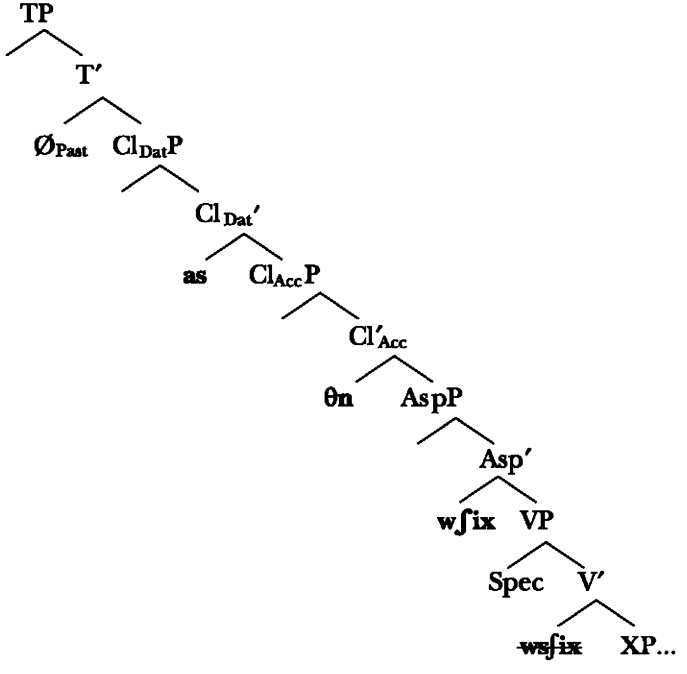
(59) [$_{CP}$ [$_{NegP}$ ur- [$_{TP}$ Ø [$_{CLPDat}$ as- [$_{CLPAcc}$ θn [$_{AspP}$ wʃix [$_{VP}$ ~~wʃix~~]]]]]]
Neg- past him- them give.neg.PER.1s ~~give.neg.PER.1s~~

The example in (55) is derived in almost the same way. The only difference is that the higher phonologically overt head that is available to act as a host for the object clitics is the complementizer as illustrated in (60):

(60) [$_{CP}$ argaz ay- [$_{TP}$ Ø [$_{CLPDat}$ as- [$_{CLPAcc}$ θn [$_{AspP}$ wʃan [$_{VP}$ ~~wʃan~~]]]]]]
man Comp- past him- them give.PER.Part ~~give.PER.Part~~

Since condition (58) is a phonological condition in the sense that cliticization is purely phonological, any phonologically overt head preceding the clitics can act as a host at the PF interface. This takes us back to example (52) where the clitics are attached to the verb. I proposed earlier that the verb only moves to the Asp head in the syntax and in this sentence T should be occupied by a null tense marker as represented in (61):

(61)



However, at PF there would be no phonologically overt head preceding the clitics. As a last resort PF movement of V-to-T is triggered. Notice that

T contains a null Past tense marker but it is not visible at PF therefore V-to-T becomes possible. The motivation for the movement is prosodic, in the sense that the verb moves to a position where it can serve as a legitimate clitic host for the otherwise "doomed" clitics. This makes use of an operation that is attested cross linguistically namely V-to-T although its application in Berber happens as a last resort operation.

To summarize, I proposed that clitic distribution is not a result of head movement as proposed in Ouhalla (2005a), nor is it a result of XP-movement as proposed by Boukhris (1998). Rather, it is a result of the clitics being functional heads that morphologically merge with any available, phonologically overt, higher head. In the case where no such head is available a PF movement of V-to-T takes place. In the next section I will show how my analysis also provides a better account for variation in the distribution of object pronominal clitics in Berber dialects including Siwa dialect which exhibits a unique object pronominal clitic distribution previously undiscussed in the Berber generative literature.

6.4 Variation

Berber dialects show some variation in the distribution of object pronominal clitics, mainly in cases where negation and a tense particle co-occur in the same sentence. In Tamazight-type dialects the only possible order is NEG-T-CL V, whereas in Tarifit-type dialects the order has to be T-NEG-CL V.

(62) ur- da- as wʃəx ləcθæb (QTB)
Neg- will- him give.PER.1s book
"I will not give the book"

(63) manwn dža **wa- s- t** y-uri-n (Tarifit)
Who PTP NEG $CL_{DAT.3S.F/M}$ $CL_{ACC.3S.M/F}$ write.NEG.PER-PART
"Who had not written it for him?"

(Elouazizi 2005: 17)

Elouazizi (2004, 2005) has argued that the clause structure of Tarifit has TP immediately dominating NegP, contra Ouhalla's (1988) original proposal where he suggested that NegP dominates IP in this language. If Elouazizi is right that would explain the difference in the clitic placement between the Tamazight-like dialects and the Tarifit-like dialects as shown in (64) and (65).

Tarifit-like dialects:

(64) $[_{CP}\ C\ [_{TP}\ T\ [_{NegP}\ Neg\ [_{CLPDat}\ CL_{Dat}\ [_{CLPAcc}\ CL_{Acc}\ [_{AspP}\ Asp\ [_{VP}\ V\ \ .]]]]]]]$

Tamazight-like dialects:

(65) $[_{CP}\ C\ [_{NegP}\ Neg\ [_{TP}\ T\ [_{CLPDat}\ CL_{Dat}\ [_{CLPAcc}\ CL_{ACC}\ [_{AspP}\ Asp\ [_{VP}\ V\ \ .]]]]]]]$

This explains why in Tarifit-like dialects the clitics cliticize to negation. In affirmative sentences, if there is an overt tense auxiliary, the clitics will cliticize to it, otherwise, if there is a complementizer, they cliticize to it, but if there is no complementizer, and as a last resort, the verb will move to T at PF.

Given the distribution of the pronominal clitics described in this work, one cannot treat them as verbal affixes. However, if the clitics always appear on the verb it would be very plausible to treat them as verbal affixes. In fact there is a body of literature that analyzes for example Macedonian, French, Romanian and Italian clitics as affixes similar to inflectional affixes (see for example Halpern 1995). In these languages, these pronominal clitics always attach to the verb, which is one of the major properties of agreement affixes. Ouhalla (2005a) reports following Guerssel (p.c., 2000) that in Ayt Seghroushn Tamazight dialect both of the following examples are possible:

(66) Lla =t issa. (Guerssel, p.c., 2000)
T_{PRES} $=it_{ACC}$ $_3$MS-drink$_{IMPER}$
"He is drinking it/he drinks it"

(67) Lla issa= t
T_{PRES} $_3$MS-drink$_{IMPER}$ = it_{ACC}

In this dialect the object pronominal clitic can either appear attached to the present tense particle as it does in all other dialects and as shown in (66), or appear attached to the verb as shown in (67). These facts resist explanation by any analysis proposed for the Berber pronominal clitics.

Given the optionality shown in (66) and (67) one could argue that the grammar of this dialect allows: (a) the clitics to be generated as affixes and their placement to be generated syntactically by verb movement, and (b) the clitics to be generated as clitic heads whose placement is determined at PF. It is also very plausible that a child, exposed to ambiguous input like (66) and (67), constructs a "simpler" grammar where only one of

the two options listed above is derivable. If a child constructs a grammar where the clitics are merged as clitic heads in the functional domain, she will get the same distribution of the clitics found in the Tamazight dialect described in this work. However if the child constructs a grammar where the clitics are generated as affixes attaching to the verb, the clitics will have the same distribution found, interestingly, in the Siwa Berber dialect as reported in Laoust who writes:

> Contrairement à ce qu'on observe dans tous les dialectes connus, les prônons régimes occupent en Siwi une place fixe à la suite du verbe, que celui-ci soit ou non sous la dépense de la négation, de la particule du future [. H.O.] La loi d'attraction, qui est d'application constante en berbère, ne joue pas ou ne joue plus dans le dialecte qui nous intéresse ici. (1932: 112)

Translated as:

> Contrary to what is observed in all the other known Berber dialects, the pronominal clitics occupy a fixed position in Siwi Berber, immediately following the verb, and not following negation or the future particle. The law of attraction that applies constantly in Berber does not apply or no longer applies in the dialect we are interested in.

It is interesting how Laoust suspected that the cliticization rule that applies in the other Berber dialects might have ceased to apply in this dialect, in other words the children constructed a grammar where the clitics are affixal, but not vice versa where the other dialects lost whatever rule that forces the clitics to be affixal. I will come back to this point but first let us look at some of the examples that Laoust provides:

(68) ummig- ak (Laoust 1932: 112)
tell.PER.1s you
"I told you" **V-CL**

(69) la ummig- ak (Laoust 1932: 112)
Neg tell.PER.1s you
"I didn't tell you" **Neg V-CL**

(70) ga sg- aun (Laoust 1932: 113)
will give.AOR.1s youPL
"I will give you . **Fut V-CL**

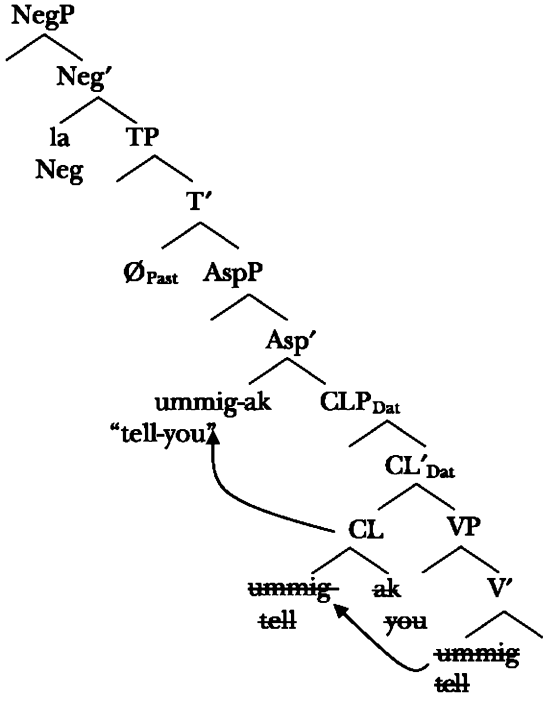
Louali and Philippson (2005) have reported the same facts and note that:

in Siwi the clitics are always post-cliticized to the verb and cannot precede it, contrary to what is found in most Berber languages" as illustrated in (71):

(71) la i-zz ´nz- as **Neg V-CL**
Neg sell.AOR. CL_{DAT3s}
"he didn't sell (to) him/her" (Louali and Philippson 2005: 2)

These facts are a clear violation of Ouhalla's condition in (22) which states that the object pronominal clitics are attracted to the "preverbal position" by functional categories. They also present a serious problem for Boukhris (1998) according to which negation should attract the clitic in (69) and (71) for example to a position (Spec, TP) preceding the verb. For the analysis I proposed, this would not be a correspondingly serious problem because I assume that the clitics in this dialect are merged between the AspP and VP and a sentence like (69) is derived as shown in (72):[4]

(72)



As is the case in all Berber dialects, the verb always moves to Asp^0 overtly, and due to the position in the clause structure the clitics always end up encliticized onto the verb.

Going back to the Ayt Seghroushn dialect and the optionality it exhibits, whether a child exposed to this optionality constructs a Tamazight-like grammar where the clitics cliticize to different hosts since their placement is determined at PF or Siwi-like grammar where the clitics are affixal and their placement is derived syntactically by verb movement, remains to be discovered.

However, given the widely accepted assumption that subject agreement markers especially in pro-drop languages are syntactically reanalyzed pronouns, the object clitics could very well be reanalyzed pronouns. However, these clitics do not have the affix status in some dialects yet, which would be the next step in the reanalysis. The continuum looks as follows:

(73) Pronoun > Clitic > Agreement Affix/inflection

The fact that these clitics behave like affixes in Siwi does not make them agreement heads (contra Elouazizi 2005) akin to the subject-verb agreement because, unlike subject-verb agreement they are not obligatory and do not always show up with overt object DP's as shown in (74):

(74)	la	g	isu	**aman**	(Laoust 1932: 55)
	Neg	Fut	drink.AOR.3s	water	
	"he will not drink water"				

Given the optionality discussed above and given (73) one would predict the child to construct a grammar where the clitics are affixal and therefore their derivation would be syntactic via verb movement consistently with Laoust's (1932) observation about their occurrence to the right of the verb.

Having argued that object pronominal clitics are merged as clitic heads in the functional domain, in the next chapter I will analyze clitic doubling and argue that it is another form of agreement obtained upon establishing a C-Command probe goal relation between the clitic head and the DP object in its C-Command domain.

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Chapter 7

Clitic Doubling

There have been different views about the nature of clitic doubled DPs, their structural positions and the way they are assigned Case (See Aoun (1999), Dobrovie-Sorin (1990), Jaeggli (1982, 1986), Kayne (2003), Sportiche (1998), Uriagereka (1995) among others). Clitic doubling is another example of feature sharing between two syntactic elements, the clitic and the doubled DP. This feature sharing or agreement has been argued to obtain syntactically through a Spec-head relation. I will argue instead that this agreement is obtained through a Probe-Goal relation between the clitic and the DP it doubles which follows from the analysis of the distribution of object pronominal clitics I have argued for in the previous chapter; namely, I argued that the distribution of object pronominal clitics in Tamazight favors a clitic shell analysis proposed by Sportiche (1992, 1998) for Romance. First let us review the properties of clitic doubling in Tamazight Berber.

7.1 Tamazight Clitic Doubling: Properties

Indirect objects (Dative DPs) can be doubled in Tamazight Berber. Independently of clitic doubling, they are always preceded by a preposition.[1]

(1) wʃix-**as** ləcθæb i-**Fatima**
give.PER.1s-her book to Fatima
"I gave the book to Fatima"

(2) ləqəmx-**asən** attay i-**lwaʃun**
make.PER.1s-them tea to-kids
"I made tea for the kids"

(3) da-**as** aznəx θabrat i-**wəlm-a**
will-her send.AOR.3s letter to-**sister-my**
"I will send a letter to my sister"

Unlike languages such as Spanish and Romanian, clitic doubling with indirect objects is not obligatory in Tamazight:

(4) wʃix(-**as**) ləcθæb i-Fatima
give.PER.1s(-her) book to-Fatima
"I gave the book to Fatima"

However, clitic doubling is semantically constrained in that the doubled DP must be specific/definite:

(5) wʃix-**as** ləcθæb i-wərba
give.PER.3s-him book to-boy
"I gave the book to the boy/ *a boy"

(6) θəsnəʕθ-**as** abrið i-wərgaz
show.PER.3sf-him way to-man
"She showed the man/*a man the way"

Clitic doubling in Tamazight is not sensitive to certain semantic features like [±*human*] as in Romanian (Dobrovie-Sorin 1990), or [±*animate*] as in Spanish (Jaeggli 1986). In Berber, clitic doubling is possible regardless of which of these semantic feature specifications the doubled DP has, [+/–animate] or [+/–human].

(7) gix-**as** ssaqta i-**lbab**
make.PER.1s-**it** lock to-door
"I made a lock to the door/ I locked the door"

(8) wʃix-**as** acsum i-**wmuʃ**
give.PER.1s-**him** meat to-**cat**
"I gave the cat meat"

(9) wʃix-**as** ləhdiθ i-**θərbat**
give.PER.1s-her present to-girl
"I gave the girl a present"

As pointed out by Guerssel (1995), clitic doubling in Berber correlates with definiteness. However, this language does not have overt articles to mark definiteness or indefiniteness. Generally speaking, the definiteness interpretation of Berber DP's is ambiguous and is determined by the context. This is illustrated by the following examples:

(10) ywʃa wərba θacurθ i-θərbat
3s.give.PER boy ball to-girl
"The boy gave a ball/the ball to a girl/the girl"

(11) yəssərs wərba azru x-θcurθ
3s.put.PER boy stone on-ball
"The boy put a stone/the stone on a ball/the ball"

(12) yəssərs wərba θacurθ x-uzru
3s.put.PER boy ball on stone
"The boy put a ball/the ball on a stone/the stone"

In clitic doubling constructions, the ambiguity of object DP's between definite and indefinite interpretations disappears as shown in (7), (8) and (9) provided earlier.

Before we discuss the structural properties of clitic doubling and propose an analysis for it, we will first argue against treating Clitic Doubling as a case of clitic dislocation.

7.2 Against Doubling as Dislocation

As pointed out in the previous section, indirect object can be doubled in QTB as shown in (13). Direct objects on the other hand cannot be doubled as in (14):

(13) wʃix-**as** ləcθæb i-wərba
give.PER.3s-him book to-boy
"I gave the book to the boy/ *a boy"

(14) *wʃix-**it** ləcθæb i-wərba
give.PER.3s-it book to-boy
"*I gave it the book to the boy"

One could treat clitic doubling constructions such as (13) as cases of dislocation where the full DP is not in the canonical argument position but is right-adjoined to the clause and enters in a dislocation relation with the pronominal dative clitic. However, there are reasons to believe that this treatment would be a misguided characterization of these facts. The first reason has to do with the lack of the intonation break before the doubled dative DP, which is normally found with left-dislocated DP's as in

(15) arba, **wʃix-as** ləcθæb
boy, give.PER.3s-him book
"the boy, I gave him the book"

The second reason has to do with the obligatoriness of the preposition or the Case marker with the DP which is not the case with the left-dislocated DP's.

(16) *wʃix-**as** ləcθæb wərba
give.PER.3s-him book boy
"I gave the book to the boy/ *a boy"

(17) *i-wərba, wʃix ləcθæb
boy, give.PER.3s-him book
"the boy, I gave him the book"

The occurrence of a preposition with a doubled DP was noted in other languages especially Romanian and Spanish which led to the formulation of what Jaegglie (1982) calls *Kayne's Generalization* informally stated in (18):

(18) Kayne's Generalization
A lexical NP may be doubled only if it is preceded by a (preposition) case assigner. The NP following this Case assigner is marked for Dative Case.

Note also that the direct object, which cannot be doubled, can however be left dislocated as illustrated in (19) and does not require a preposition Case assigner.

(19) ləcθæb, wʃix-**t** i-wərba
give.PER.3s-him book to-boy
"the book, I gave it to the boy"

In fact left-dislocated indirect objects cannot be preceded by a preposition either as shown by (20) and (21):

(20) arba, wʃix-**as** ləcθæb
boy, give.PER.3s-him book
"the boy, I gave him the book"

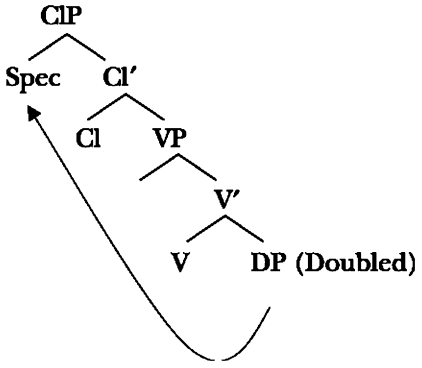
(21) i-wərba, wʃix-**as** ləcθæb
to-boy, give.PER.3s-him book
"*to the boy, I gave him the book"

I conclude from this that what we are dealing with here is clitic doubling and not dislocation. The next section reviews the main proposals about the syntactic position of the clitic doubled DP.

7.3 The Position of Clitic Doubled DPs

There are two main widely accepted views on clitics and clitic doubling. The first assumes that clitics are first (externally) merged as heads in the functional domain (Manzini (1998), Ouali (2005), Sportiche (1992, 1998) for Berber). The second approach treats clitics as D(eterminers) heading a DP argument (see Belletti (1995), Kayne (2003) and Uriagereka (1995) for Romance, and Boukhris (1998) for Tamazight). These two main approaches are similar in that in both analyses the agreement between the clitic and the Double is a Spec-head relation. However, they differ in whether this Spec-head agreement is basic (Kayne (2003), Uriagereka (1995)) or derived (Sportiche 1992, 1998). Sportiche assumes that clitics are generated as functional heads (CL), the double DP is inserted in a canonical argument position and at some point of the derivation it moves to Spec of CLP as in (22).

(22) Sportiche 1992



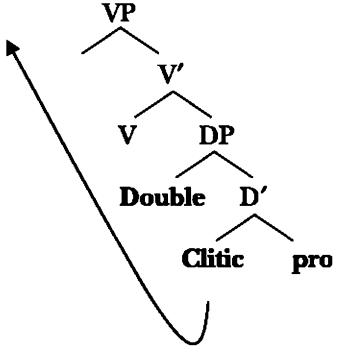
According to Sportiche (1996, 1998) the need to meet the clitic criterion in (23) is what triggers the movement of the doubled element to Spec of ClP.

(23) **Clitic Criterion**

a. A clitic must be in Spec-head relationship with a [+F] XP at LF.
b. A [+F] XP must be in a Spec-head relationship with a clitic at LF.
(Sportiche 1996: 236)

Uriagereka (1995) on the other hand argues that both the clitic and the doubled DP are merged in an argument position, and later during the course of the derivation the clitic head-moves to its surface position. The clitic being the head of the DP and the double being in its Spec as illustrated in (24) we can see that the Spec-head relation between the clitic and double is basic.

(24) Uriagereka 1995:



The clitic, as attested cross linguistically, must C-Command the DP it doubles, the same structural relation under which subject-verb agreement is obtained. Most recent analyses proposed for clitic doubling argue that such agreement is obtained through a Spec-head relation. I will argue that one need not appeal to the Spec-head movement analysis, hence no need for the clitic criterion in (23), since an agreement relation can in fact be established between the clitic (Probe) and the doubled DP (Goal) given the analysis that object clitics are merged as clitic heads in the functional domain.

I will analyze clitic doubling as another case of agreement derived via a Probe-Goal relation. This raises the following question: what is the nature of these clitic pronouns? Notice that unlike subject-verb agreement, these clitics are not obligatory in the sense that they can be dropped without causing ungrammaticality as shown in (25):

(25) wʃix-(**as**) ləcθæb i-Məryəm
gave.PER.1s-(**her**) book to-Merriam
"I gave Merriam a book"

Moreover, the clitic cannot co-occur with an extracted object as shown in (26), which makes it similar to the subject-verb agreement which cannot co-occur with an extracted subject (AAE) as explored in Chapter 5.

(26) Məryəm ami wʃix-(*as) ləcθæb
Merriam that give.PER.1s-(*her) book
"It was to Merriam that I gave the book"

7.4 Clitic Doubling as a Form of Agreement: Analysis

The first question that I will address is what features the pronominal clitics and their doubled DP's have in common/share. First, they have to share φ-features namely Person, Number, and Gender, although only second person exhibits gender differences as illustrated in (27):

(27) **Dative Pronominal Clitics Paradigm in Tamazight Berber:**

-yi	"me"
-ak	"you-Masculine"
-am	"you-Feminine"
-as	"it, him, her"
-ax	"us"
-akun	"you-PL"
-asən	"them"

As shown in the examples (28) and (29), if the clitic and the DP do not agree in φ-features, ungrammaticality results.

(28) wʃix-as ləcθæb i-θərbat
Give.PER.1s-her book to-girl
"I give the book to the girl"

(29) *wʃix-asən ləcθæb i-θərbat
Give.PER.1s-them book to-girl

As pointed out before, NP's in Berber are ambiguous between definite and indefinite. This ambiguity disappears in clitic doubling contexts which suggests that besides the φ-features, the clitic and its doubled DP must agree in Definiteness, a reason why a number of researchers such as Belletti (1993), Uriagereka (1995), and Kayne (2003) among many others, treat pronominal clitics as D-heads. Pronouns are inherently definite whereas NP's are not.

Another feature that the clitic and the DP arguably share is Case. Berber distinguishes between accusative and dative clitics, except for first person plural (at least in Tamazight). The accusative clitics paradigm is provided in (30):

(30) **Accusative Pronominal Clitics Paradigm in Tamazight Berber**:

-i	"me-ACC"
-k	"you-ACC"
-th	"it-MAS-ACC./him-ACC"
-t	"it-FEM/ her-ACC"
-akh	"us-ACC"
-aken	"you-PL-ACC"
-then	"them-ACC"

To summarize, the clitic and the DP have to agree in φ-features, Definiteness and Case in clitic doubling contexts as schematized in (31):

(31)

CL		DP
φ-features	⇔	φ-features
Case	⇔	Case
Definiteness	⇔	Definiteness

As I mentioned before, I will analyze the agreement between the clitic and the DP double to be obtained via Agree. Consider the following example:

(32)

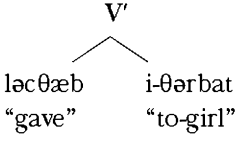
wʃix-as	ləcθæb	i-θərbat
Give.PER.1s-her	book	to-girl

"I give the book to the girl"

The derivation of this sentence proceeds as follows:

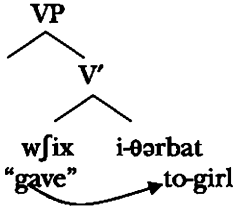
The DP object merges with the verb:

(33)



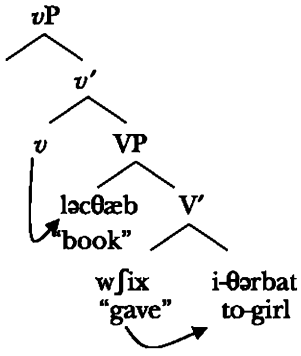
Here, I treat *i-tharbat [i-θərbat]* "to the girl" as a DP. It could be analyzed as a PP, but I assume following Ouhalla and Guerssel that *i-* is a Case marker rather than a true preposition. V presumably has unvalued φ-features, and it probes the DP establishing a Probe-Goal match relation with it. Agree then takes place resulting the valuation of V's uninterpretable φ-features and the DP's uninterpretable Case feature. However, I assume that the definiteness feature on the DP is unvalued, which keeps the DP active and visible to higher Matching probes.

(34)



The next two steps in the derivation is merging the direct object "book" in the Spec of VP and then merging *v*. Agree will again apply in the same manner between *v* and the direct object. The Accusative Case of the direct object gets valued, hence this DP is rendered inactive.

(35)



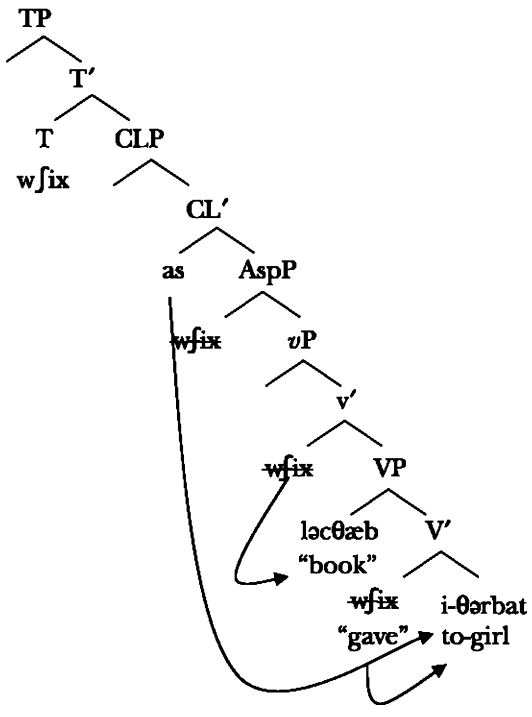
A fact that is worth mentioning here is that direct objects generally cannot be doubled in Tamazight Berber as illustrated in (36):

(36) *qrix-**θ** ləcθæb
read.1s.PER-**it** the-book
"I read the book"

This suggests that the direct object is somehow invisible to the dative clitic probe in (37) for example. Notice that it is not clear whether the direct object has a definiteness feature and how that feature gets valued. However, given the fact that direct objects never clitic double, this may not be a problem.

I assume that the object clitic, being pronominal, bears valued φ-features, unlike agreement on T for example. I also assume that since pronominals are inherently definite, the clitic bears a [+interpretable] valued definite feature. However the Case feature on the clitic is [-interpretable] and unvalued and for this reason the clitic will act as a probe when it is merged.

(37)



Notice that by the time the clitic probes a matching goal, the direct object is already inactivated. The first goal it finds is the still active indirect object which matches its φ-features.

If clitic doubling is a form of agreement, as I argued here, one would expect that extraction of the indirect object should affect this agreement in the same way that subject-verb agreement is affected with subject-extraction. This prediction is borne out as shown in (38) which is an indirect object wh-question, in (39) which is a cleft-construction, and in (40) which is a relative clause:

(38) a. ma ami ywʃa ʕli ləcθæb ?
who Comp 3sm.give.PER Ali book
"Who did Ali give the book to?"

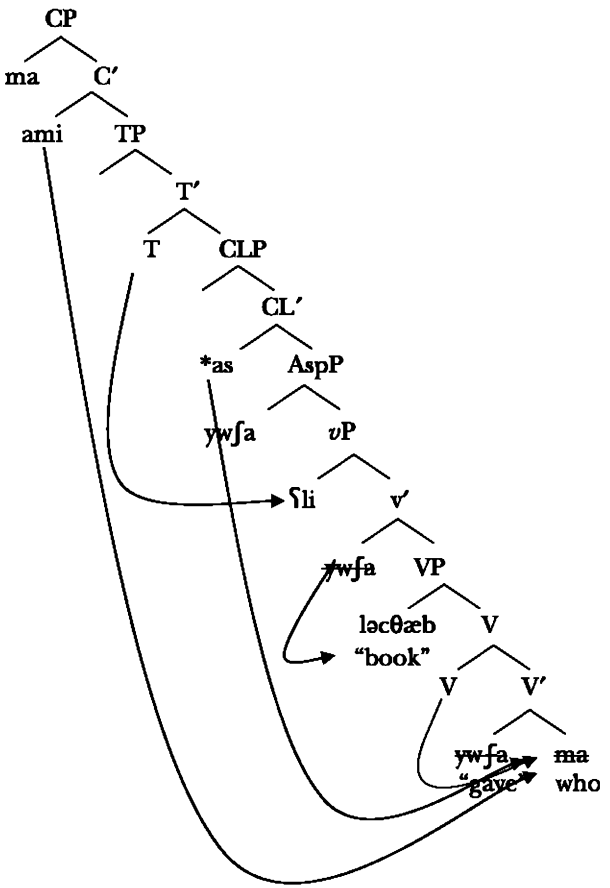
b. ***ma** ami **–as** ywʃa ʕli ləcθæb ?
who Comp **-her** 3sm.give.PER Ali book

(39) a. θarbat-a ami ywʃa ʕli ləcθæb
girl-this Comp 3sm.give.PER Ali book
"it was this girl that Ali gave the book to"
b. * θarbat-a ami **–as** ywʃa ʕli ləcθæb
girl-this Comp **-her** 3sm.give.PER Ali book

(40) a. snəx θarbat ami ywʃa ʕli ləcθæb
know.1s.IMP girl Comp 3sm.give.PER Ali book
"I know the girl who Ali gave the book to"
b. *snəx θarbat ami-**as** ywʃa ʕli ləcθæb
know.1s.IMP girl Comp-**her** 3sm.give.PER Ali book

As we can see these sentences are only possible if the clitics are left out as predicted. Let us examine the structure in (41) below which is a representation of the sentence in (38).

(41)



This is a case of **SHARE** where C transfers its φ-features to T and keeps a copy otherwise it will not value the wh-feature on the wh-phrase. As a result we observe both C-agreement, marked by an obligatory Comp, and T-agreement marked by the full subject-verb agreement on the verb. I assume that the clitic ***as***, in this case, is also marked for a [-interpretable] wh-feature. This feature does not get valued when the clitic Agrees with the wh-phrase since the wh-feature of the latter is also unvalued. The only element that bears a [+interpretable] wh-feature is C. However C cannot probe the wh-phrase over an active clitic head because that would yield a locality violation expressed in the PGLC repeated in (42) below:

(42) **PROBE GOAL LOCALITY CONDITION (PGLC)**
A Probe X cannot probe ZP over an intervening Y that bears the same un- interpretable features.

In this case both the clitic and the wh-phrase bear an uninterpretable wh-feature. Leaving out the clitic is a repair strategy. Interestingly, just as we observed how subject-verb agreement becomes possible when the subject is long-distance extracted, dative clitics also become possible the wh-indirect object is long-distance extracted as shown in (43).

(43) **ma** ami θənna Fatima ywʃa-**asən** ʕli ləcθæb ʔ
who Comp 3sf.say.PER F. 3sm.give.PER-**them** Ali book
"Who did Ali give the book to?"

(44) **[CP ma** ami [TP θənna Fatima **[CP ma** C [TP ywʃa-**asən** ʕli ləcθæb **ma]]]]**
who Comp 3sf.say.PER F. ~~who~~ 3sm.give.PER-**them** Ali book ~~who~~
"Who did Ali give the book to?"

The matrix C is specified for a wh-feature whereas the intermediate C is not. When the matrix C probes the wh-phrase, it does not probe over the clitic head since the wh-phrase has already moved to Spec of intermediate CP, hence no locality conditions are violated.[2]

To conclude, in this chapter I analyzed clitic doubling as a form of agreement. This agreement, just like subject-verb agreement, is obtained

via the operation Agree. I showed that when C probes the dative DP object over the dative clitic head, it causes an intervention/locality violation. The next chapter discusses the final topic in this book, namely, negative concord which I analyze as another form of agreement.

Chapter 8

Negative Concord

In this chapter I will present an analysis of the structural position of Negation in Tamazight Berber and I will argue that negative concord is another type of feature agreement obtained via Agree.[1] As discussed in Chapter 5, subject extraction in Berber yields what is called "the Anti-Agreement Effect" (AAE) (see Ouhalla 1993, 2005b), where overt subject-verb agreement is "suppressed." I will argue, using some previously unexplored phenomena from Tamazight Berber, that subject extraction similarly affects negative concord, as predicted if this kind of concord is itself a form of agreement.

Negative concord as a type of agreement is in fact not a novel idea. The idea that Negative Concord Items (NCI's) and Negative Polarity Items (NPI's) are licensed by a negation element goes all the way back to Klima (1964). Also, the structural relation under which Negation licenses NCI's and NPI's is C-Command, a proposal which goes back at least to Laka (1990). Extending these ideas, I argue that the licensing relation between negation and NCI's and NPI's is an Agree relation as defined in Chomsky (2001a, 2004). This type of analysis for negative concord has also been proposed by other researchers such as Zeijlstra (2004).

The main goals of this chapter are: (a) To provide an analysis of sentential negation that captures the variation in the strategies used to express negation across Berber dialects, (b) To provide evidence that the Negation head *ur (Neg1)* is generated as a head of NegP higher than TP and that *sha (Neg2)* is adjoined to VP, therefore *sha-ur* is a derived order as opposed to French *Pas-ne* "neg2-neg1" which was argued to be an "underlying" order, (c) To show that *sha* "Neg2" as well as NCI's like *no one* and *nothing* are licensed via c-command, and (d) To argue that NCI licensing is done under strict locality conditions adhering to *PGLC* in (50).[2]

8.1 Berber Negation: Typology

There are two types of dialects with regard to how negation is expressed. The first type uses one negation marker –Neg1- and these dialects are Tashelhit, spoken in the south of Morocco, and Touareg, spoken in Mali and parts of Niger, as shown in (1) and (2) respectively.

(1) ur tdda tfruxt s tgmmi (Tashelhit)
Neg1 go-PER-3sf girl to-house
"The girl did not go home"

(2) wer tusa tabarart ehan (Touareg)
Neg1 go-PER-3sf girl to-house
"The girl did not go home"
(from Rabhi 1996: 23)

The second type of dialects uses two negation markers Neg1 and Neg2 and we find two subgroups within this type. In the first subgroup (which includes Tarifit, spoken in the north of Morocco, Taqbaylit, spoken in Algeria, and Chaoui, also spoken in Algeria), Neg1 is always pre-verbal and Neg2 is always post-verbal as shown in (3), (4), and (5) respectively.

(3) ur izri shi imams (Tarifit)
Neg1 see.PER.3s Neg2 mother-his
"He didn't see his mother"

(4) ur kcimegh ara (Taqbaylit)
Neg1 enter.PER.1s Neg2
"I didn't enter" (Nait-Zerrad 1994: 32)

(5) ud yusi -ca (Chaoui)
Neg1 come.PER.3sm -Neg2
"He didn't come" (Nait-Zerrad 1994: 34)

In the second subgroup, which, as far as I know, consists only of one dialect namely Tamazight, **Neg1** behaves the same way as in other dialects but **Neg2** behaves differently in the sense that it can be either post-verbal or pre-verbal as shown in (6) and (7).

(6) **ur** uɣəx **sha** ləcθæb
Neg1 1s-bought.PER-1s **Neg2** book
"I did not buy the book"

(7) **sha-ur** dix ɣir-s (QTB)
Neg2-Neg1 go.neg.PER.1s to-him
"I didn't go to him/ I didn't visit him"

The distribution of Neg1 and Neg2 across Berber dialects is summarized in (8) and (9).

(8) Summary

Tashelhit/Touareg	Taqbaylit, Tarifit, Chaoui	Tamazight
ur verb	**ur** verb(**sha**)	**ur** verb(**sha**)
		(**sha**)**ur** verb

(9) **Negation Typology:**

Type1: One Neg	Type2: Two Negs	
Neg1 Verb (Tashelhit, Touareg)	Type2a: **Neg1** Verb (Neg2) (Tarifi, Taqbaylit, Chaoui)	Type2b: **Neg1**Verb (**Neg2**) (**Neg2**)-**Neg1** Verb (Tamazight)

In all the Berber dialects the first negation element is obligatory and must be pre-verbal as shown in (10) through (13).

(10) ur θəʃlix (*ur) assa (Tamazight)
Neg1 see.PER.1s (*neg) day-this
"I haven't seen him today"

(11) ur iʃlim (*ur) (Taqbaylit)
Neg1 know.PER.3s (*Neg1)
"He didn't know"

(12) ur iʃa (*ur) imkli wəħdu (Tashelhit)
Neg1 eat.PER.3s (*neg) lunch alone
"He didn't have lunch alone"

(13) war inwi (*war) sha (Tarifit)
Neg1 think.past.3s (*neg) Neg2
"He didn't think"

In each of these examples, putting Neg1 in a post-verbal position causes ungrammaticality. When it comes to the second negation element -Neg2-, these dialects, as pointed out earlier, show some variation. In Touareg, as reported in Nait-Zerrad (1994), as well as in Tashelhit, it is nonexistent. In Tamazight, Taqbaylit and Tarifit, it is used optionally. It has to appear after the verb in Tarifit and Taqbaylit as shown in (14) and (15) but can also appear pre-verbally in Tamazight as shown in (16).

(14) u-sn twʃi (sha) arbii (Tarifit)
Neg1-them give.PER.3s (Neg2) grass
"She didn't give them grass"

(15) ur kʃiməgh (ara) (Taqbaylit)
Neg1 entered.PER.1s (Neg2)
"I didn't enter"

(16) (sha) ur swix (sha) (Tamazight)
(Neg2) Neg1 drink-PER.1s (Neg2)
"I didn't drink"

The negative element *ur* (Neg1) can also co-occur with negative expressions like *walu* "nothing" and *agidʒ* "no one."[3] *Walu* "nothing" is the direct object and appears after the verb in (17). It can also be extracted/ A-bar moved hence precede both *ur* and the verb as in (17). The same thing is also true of *agidʒ* "no one" which is post-verbal in (18), and extracted in (18).

(17) a. *ur*-as wʃix walu (Tamazight)
neg-him give.PER.3s nothing
"I didn't give him anything"
b. walu ur-as wʃix
nothing Neg1-him gave
"I gave him nothing"

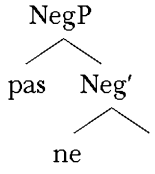
(18) a. ur iddi agidʒ ɣər skʷila
neg go.PER.neg.3s no one to school
"Nobody went to school"
b. agidʒ ur iddin ɣər skeela
no one neg go.PER.Part to school
"Nobody went to school"

I will argue below that these negative expressions are licensed in their "underlying" position via c-command, a standard licensing configuration. This becomes clear when we look at their interaction with the second negation elements Neg2. First let us discuss the structural position of negation.

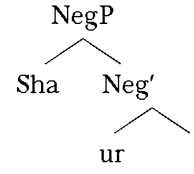
8.2 The Structural Positions of Neg1 and Neg2

I follow the standard assumption that Neg heads its own maximal projection NegP. This assumption has been made for English and Romance (Pollock 1989, Laka (1990), Zanuttini (1991)) and for Berber (Ouhalla (1990, 1991), Ouali (1999, 2003)).

(19) *a. French*



b. Tamazight Berber



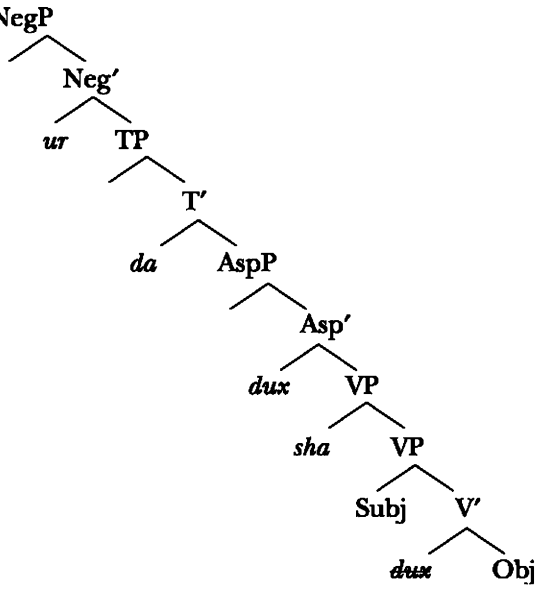
There are a number of arguments for Neg as head of NegP. First, it has been shown that Neg interacts with the verb by Blocking V movement to T in English (Pollock 1989, Chomsky 1995). Second, it has been shown that Neg interacts with Tense and Agreement: Neg inflects for tense in Standard Arabic (Fassi Fehri 1991) and for agreement in Finish. Third, it has been argued that Neg blocks clitic movement or so-called clitic climbing in Italian (Kayne 1989a), and in Berber Neg is one of the different head elements that can host object pronominal clitics (Ouhalla 1988, 2005a, Boukhris 1998, Ouali 1999, 2003, 2005, see Chapter 6).

Pollock (1989), has proposed that French *ne* originates in a functional projection lower than Infl and then raises and adjoins to a higher functional head whereas Laka (1990) and Zanuttini (1990,1991), among others, have proposed that the pre-verbal negative markers of Italian and Spanish are the head of a functional projection higher than Infl. I will adopt the latter view and assume following Ouhalla (1991) that Neg in Berber is

higher than IP/TP. I will also assume that *sha* Neg2 in (20), for example, is adjoined to VP/*v*P as illustrated in (21).

(20) **ur-** da- dux **sha**
Neg1- Aux- go.IMPF.1ps Neg2
"He will not go"

(21)



Given these assumptions, it follows that in Tamazight *sha-ur* (Neg2-Neg1) is a derived order; unlike in French where it is assumed that pas-ne (Neg2-Neg1) is the "underlying" order. This leads us to the cross linguistic comparison in (22) which basically shows that some Berber dialects namely Touareg and Thashelhit behave like some Romance languages, such as Italian, in having one Neg marker which is pre-verbal (22)a. Others are like French in having two Neg markers and these are Tarifit, Taqbaylit, Chaoui and Tamazight (22)d. Also, it is known that in colloquial French *ne* Neg1 can be dropped but *pas* Neg2 cannot (22)b. Tamazight is the mirror image of French in that *sha* Neg2 (pas-counterpart) can be dropped whereas *ur*, the Neg head, cannot (22)d). And finally Tamazight seems to be the only Berber dialect where Neg2 can precede Neg1 (22)e.

(22) **Cross-linguistic comparison:**

a.	***Non*** mangia	Neg + Finite	Italian, Touareg & Tashelhit
b.	Il (**ne**) mange *(**pas**)	(Neg1) + Finite V + *(Neg2)	French
c.	A mengia **nen**	Finite V + Neg	Piedmontese
	(The examples are from Haegeman and Zanuttini 1999)		
d.	**ur** la ytət (**sha**)	*(Neg1) + Finite V + (Neg2)	Tarifit, Taqbaylit, Chaoui & Tamazight
e.	**sha ur** la ytət "He doesn't eat"	(Neg2) + *(Neg1) + Finite V	Tamazight

8.3 Negative Polarity vs. Negative Concord

As demonstrated in the previous sections, ***ur*** –Neg1- is an obligatory Neg head in Berber and it is what carries "the negative" force, as shown in the Tamazight example below. It cannot be dropped whether *sha* is present or not:

(23) *uɣəx (sha) ləcθæb (Tamazight)
1s-bought-1s (Neg2) book
"I did not buy the book"

The example in (23) also shows that ***sha*** can only be licensed if ur (Neg1) is present. Besides licensing ***sha*** –Neg2-, ***ur*** -Neg1 also licenses negative expressions like ***agidʒ*** "no one" and ***walu*** "nothing" as shown in (24) and (25) respectively.

(24) ur iddi agidʒ
Neg leave.PER.neg.3sm not-even-one
"No one read left"

(25) ur ʒlix walu
Neg1 see.PER.3sm nothing
"I saw nothing"

Ouali (2003, 2005) treats these expressions as NPI's. However there are good arguments that these expressions are in fact Negative Concord Item's (NCI). The difference between an NPI and an NCI is a theoretical question

and is subject to much debate in the literature. Watanabe (2004) argues that NCI's are inherently negative contra Giannakidou (2000). He argues that NCI's have an uninterpretable focus feature whereas NPI's do not and that in Languages with Negative Concord, the Neg-head enters into an Agree relation with the NCI, whereas in Languages with Double Negation this is not the case. Valduví (1994) uses four diagnostic tests to distinguish between negative concord and negative polarity items in Catalan, and Watanabe (2004) uses the same tests for Japanese and other languages. These tests are:

(26)	NCI	NPI
a. Ability to appear in nonnegative contexts	**no**	**yes**
b. Ability to appear in preverbal position	**yes**	**no**
c. Ability to be modified by expressions like almost	**yes**	**no**
d. Ability to be used as an elliptical answer	**yes**	**no**
e. Clause-bound	**no**	**yes**

The fifth test (26)e, as noted in Watanabe (2004), is used by Giannakidou (2000) in her comparison of emphatic vs. non-emphatic n-words in Greek. According to Watanabe, the rule of thumb is that,

> the negative concord item **cannot appear in nonnegative contexts, can appear in the preverbal subject position above negation, can be modified by expressions like almost, can be used as elliptical answer, and cannot be licensed across an indicative clause boundary** [my emphasis H.O.] (Watanabe 2004: 562).

Let us then put the negative expressions ***agidʒ*** and ***walu*** through these tests to determine whether they are NCI's or NPI's.

a. **Ability to occur in non-negative contexts:**
Negative polarity expressions such as *Anyone* in English can appear in non-negative contexts such as yes-no questions and conditionals whereas Tamazight Berber negative expressions *agidʒ* and *walu* cannot as illustrated in (27).

(27) a. Have you seen anyone ?
b. *is θəʃliθ agidʒ ? Tamazight
Comp 2s.see.PER not-even-one

(28) a. if you find anything here, I'll give you a million dollars.

b. *cəm	θufiθ	walu,	ac-uʃəx	məlyun
*if	2s.find.IMP	nothing	you-give.IMP.2s	million

This first test suggests that *agidʒ* and *walu* behave like NCI's.

b. **Ability to appear in preverbal position:**
In English, only negative concord expressions such as *no one* can appear in pre-verbal position whereas NPI's such as *anybody* cannot. In Tamazight Berber, *agidʒ* and *walu* can appear in pre-verbal position as illustrated in (29).

(29) a. No body left
b. *Anybody left

c. agidʒ	ur	iddin
Not-even-one	Neg1	leave.neg.Part

This test again shows that *agidʒ* and *walu* behave like NCI's.

c. **Ability to be modified by expressions like "almost":**
NPI's such as anyone in English cannot be modified by expressions such as "almost" as opposed to NCI's. The expressions agidʒ and walu here again behave more like NCI's as shown in (30).

(30) a. *John didn't eat almost anything.
b. John ate almost nothing

c. ur	itʃi	təqriban	walu
Neg1	eat.3s.PER	almost	nothing

"He ate almost nothing"

d. **Ability to be used as an elliptical answer:**
Concord items can appear as an elliptical answer whereas Polarity items cannot as shown by the English examples in (31). As illustrated in (31), expressions such as *agidʒ* behave like NCI's.

(31) a. Q: who came?
A: "no one/ *anyone"

b. Q: ma ag didan?
Who Comp come.PER.Part
"who came?"
A: agidʒ
"No one"

e. **Clause boundedness test:**
Licensing NPI's can take place across a clause boundary whereas licensing NCI's cannot as illustrated in (32).

(32) a. John didn't say that Bill admired anyone.
b. *ur θnni maria is iʕla ʕli agidʒ
*Neg1 3sf.say.PER Maria Comp 3sm.see.PER Ali not-even-one
"Maria didn't say that ali saw anyone"

These tests then strongly suggest that, unlike what was claimed in Ouali (2003, 2005), negative expressions such as *agidʒ* and *walu* are concord items. This takes us back to the negative expression *sha* –Neg2-. The question now is what type of negative expression is *sha*? Is it an NCI or an NPI? At first glance it seems similar or parallel to the French negative adverbial *pas*. However, this similarity is not complete for the following reasons: Unlike *pas*, *sha* does not carry any negative force by itself compared to *ur* as shown by (23) earlier. Also, *ur-sha* seems to be the mirror image of French *ne-pas* in its syntactic behavior. Like French *ne*, Berber *ur* is the negative head as independently argued for in Ouhalla (1988, 1993) and Ouali (2003, 2005) among others. One of the main arguments that *ne* and *ur* are syntactic heads is that they can host object pronominal clitics as shown in (33) and (34) respectively:.

(33) Je ne le respecte pas French
I Neg him respect Neg
"I don't respect him"

(34) ur- as-it wʃix sha QTB
Neg-him-it gave Neg
"I didn't give it to him"

Unlike *ne*, as we just mentioned, *ur* is semantically negative that is, carries negative force whereas ***sha*** does not. If we put ***sha*** to the tests in (26) we find

that it can appear in non-negative contexts as in the following yes-no question:

(35) is θəʕliθ sha NPI
Q see.PER.2s Neg
"did you see anything?"

(36) did you see anything?

This qualifies *sha* to be an NPI. In (35) *sha* behaves like an existential quantifier, which again confirms the idea that it is not inherently negative.

Second, *sha* can in fact appear in a preverbal position which now makes it look like an NCI as shown in (37):[4]

(37) sha-ur uɣəx ləcθæb NCI
Neg2-Neg1 1s-bought-1s book
"I didn't buy the book"

Third, *sha* cannot be modified by expressions like almost, a typical behavior of NPI's:

(38) *ur θəddi təqriban sha NPI
Neg1 go.PER.3sf almost Neg2

Next, sha cannot be used in elliptical answers as shown in (39):

(39) Q. ma ag dəddan NPI
who Comp Or.come.PER.Part[5]
"who came"
A. *sha
Neg

Last, ***sha*** cannot be licensed across a clause boundary:

(40) *ur θnni məriam is didda sha ʕli NCI
Neg1 say.PER.3sf Meriam if Or.came.3sm Neg2 Ali
"Meriam didn't say that Ali didn't come"

According to the tests in (35), (38), and (39), ***sha*** behaves like an NPI. But according to the tests in (37) through (40), *sha* is an NCI. I conclude then that this mixed behavior suggests that *sha* like NCI's has to be locally licensed by a Neg-head and like NPI's it is not inherently negative. I will assume that it is specified for an unvalued uninterpretable Neg-feature that needs to be valued and deleted.

What is interesting is that if we submit French ***Pas*** to these same tests that we just did for *sha*, we find that it cannot appear in non-negative contexts, an obvious prediction, since it is the constituent that carries negative force whereas *ne*, which is a scope marker according to Haegeman and Zanuttini (1996), does not. This is illustrated in (41).

(41) *Je ne fume
I Neg smoke
"I don't smoke"

Pas cannot appear in a position before a finite verb as illustrated in (42).

(42) *Je ne pas fume
I Neg Neg smoke
"I don't smoke"

It cannot be modified by expressions like almost "presque" and finally it cannot be used as an elliptical answer. This means that it is an NCI, which is the wrong conclusion, given that *Pas* is the negative marker that is able to negate a clause in French. It looks like ***Pas*** cannot be subject to these tests simply because it is the negative marker in French. The difference between *sha* and *Pas* may be due to the fact that *sha* carries no negative force where *pas* does, *sha* can be dropped and must be licensed by a Neg-head, whereas *Pas* cannot be dropped and its licenser may be dropped in some dialects. However neither *sha* nor *Pas* can license an NCI as shown in (43) and (44) respectively.

(43) *ʃlix sha agidʒ
saw Neg not-even-one
"I didn't see anybody"

(44) *J'ai pas vu personne
I have Neg seen nobody
"I have not seen anybody"

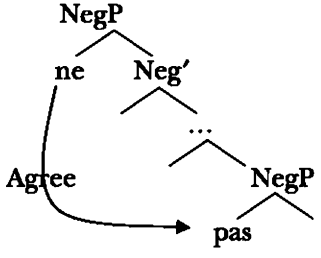
This suggests that carrying negative force is not sufficient for a lexical item (such as *pas*) to license n-words, because *pas* presumably c-commands *personne* but still cannot license it (*ne* is required for this purpose). Conversely, it is not a pre-requisite that a lexical item (e.g. *ur* in Berber, *ne* in French) lack negative force to license n-words or other negative expressions either. Berber *ur* is the Neg-head and the obligatory negative expression whereas *ne* is the optional negative expression in French and both license n-words, and *sha* and *Pas* in their respective languages.

Translating these facts in terms of Probe-Goal Matching relation and feature valuation I propose the following: in French the Neg-head ***ne*** is specified for an uninterpretable and unvalued Neg-feature whereas ***pas*** bears a [+interpretable, +valued] Neg-feature.[6] In Berber, the Neg-head ***ur*** bears a [+interpretable, +valued] Neg-feature, whereas ***sha*** is specified for [-interpretable, -valued] Neg-feature as summarized in (45). In both languages, the Operation Agree between the probe Neg (*ur* in Berber, and *ne* in French) and the goal results in the valuation and the deletion of the uninterpretable Neg-feature on ***ne*** in French and ***sha*** in Berber as schematized in (46). This explains why only one Neg-feature survives at LF and we do not get Double negation in languages with negative concord such as Berber and French. Negative concord, therefore, is just another form of agreement.

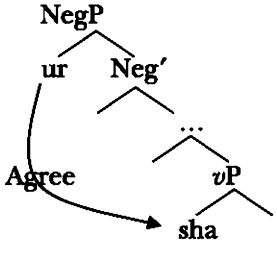
(45) French
ne{-interpretable, - valued}
pas {+interpretable, +valued}

Berber
ur {+interpretable, +valued}
sha {-interpretable, -valued}

(46) French



Berber



8.4 Anti-Negative Concord as Anti-Agreement

As discussed in the previous section expressions such as *agidʒ* "no one" and *walu* "nothing" are NCI's licensed by the Neg-head *ur*. We have not, however, discussed how this licensing takes place. I argued that licensing the expression *sha* is obtained via Agree. The question now is whether the same analysis extends to expressions such as *agidʒ* and *walu*. Watanabe (2004) presents good arguments for the assumption that NCI's are inherently negative, which in other words means that they are specified for [+interpretable] and [+valued] Neg-feature. He also presents good evidence that shows that in a number of languages NCI's exhibit similar morphology that he considers to be focus morphology. As summarized in (47), Watanabe shows that when NCI's bear/inflect for this "focus" morphology, they cannot be licensed in non-negative contexts.

(47) *Focus morphology and non-negative licensing of concord items*

	Focus morphology	Non-negative licensing
Japanese	yes	no
Modern Greek	yes	no
Russian	yes	no
Romance minimizers	yes	no
Romanian	yes/no	no

(Watanabe 2004: 37)

Concord items then systematically display focus morphology in a number of these languages. Russian has negative concord items formed by adding the prefix *ni* -to a *wh* -phrase. The representative Russian concord items together with related expressions are given in (48):

(48) *Russian (based on Haspelmath 1997)*

	Interrogative	Existential	Concord
Person	kto	kto-to	ni-kto
Thing	cto	cto-to	ni-cto
Place	gde	gde-to	ni-gde
Time	kogda	kogda-to	ni-kogda

(Watanabe 2004: 34)

Watanabe argues that the concord nature of the *ni*-series can be seen from the obligatory presence of the Neg-head as shown in (49).

(49) a. Ja *(ne) videl ni-kogo.
I NEG saw no one
"I saw no one."
b. Ni-kto *(ne) zvonil.
no one NEG called
"No one called."

In Romance, in contrast to ordinary negative concord items, minimizers can be associated with focus morphology, which is obligatory in Catalan and optional in Spanish. In Catalan: The focus morphology in question is *ni*, meaning "not even", as in (50).

(50) No vaig trobar ni ton oncle.
NEG PAST-1SG find NI your uncle
"I didn't 't even find your uncle."

The inherently negative nature of minimizers is shown by the elliptical answer in (51).

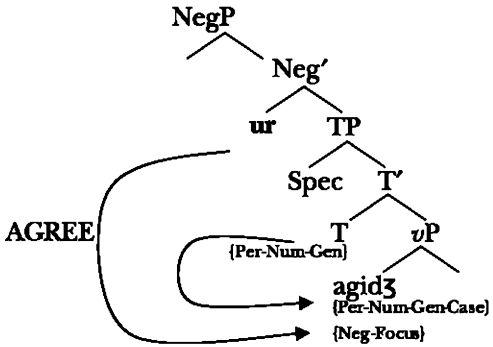
(51) a. No va dir *(ni)una paraula.
NEG PAST-3SG say *(ni) a word
"She/He didn't say a word."
b. Q: I que 'en va dir, d 'alla `?
and what of-it PAST-3SG say of-that
"And what did she/he say about that?"
A: Ni una paraula.
NI a word
"Not a word."

Interestingly, the Tamazight expression agidʒ "no one," like Catalan, consists of a minimizer *ag* "not even" and the numeral *idge* "one" and it is used productively; for example *ag-iʃt-lh¯aʃt* "nothing" literally means "not even one thing," and *ag-θaryal* "no money" literally means "not even

a penny." This is then compelling evidence that confirms Watanabe's observation that these NCI's show the same morphology which he considers to be focus morphology. Watanabe then proposes that these expressions are specified for a [-interpretable] focus feature that gets valued and deleted by virtue of a Probe-Goal relation and Agree between the Neg-head and the NCI. I will adopt the same analysis. Consider the example in (52) represented in (53):

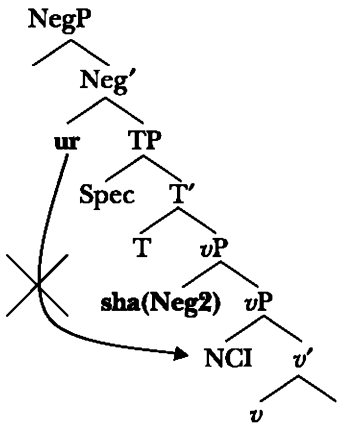
(52) ur iddi agidʒ
Neg leave.1sm.neg.PER no one
"No one left"

(53)



The subject *agidʒ* as represented in (53) enters into multiple agreement relations. The first one is with T which values its Case feature. The focus feature is not deleted and the subject NCI remains active and visible to a higher probe namely the Neg-head. Notice that dual activity of both the probe and the goal is crucial to obtain agreement. The focus feature according to Watanabe makes the NCI active, but what makes the Neg-head active and allows it to act as a probe is a mystery.[7] Watanabe has no account for this nor does anyone in the literature as far as I know. I will leave this puzzling question open for now and return to it in the next section. Let us assume that Neg-head (Neg1 in my analysis of Berber) does act as probe. The analysis predicts that if any Neg element intervenes between Neg1 and the NCI it would induce intervention effects hence a PGLC violation as represented in (54).

(54)



This prediction is borne out as shown in (55) where Neg2 intervenes between the probe Neg1 and the goal NCI "no one."

(55)	*ur	iddi	sha	agidʒ	ɣər	islan
	Neg1	go.PER.neg.3s	Neg2	no one	to	wedding

"no one went to the wedding"

The only context where NCI's like *agidʒ* "no one"/literally: "not even one," can be extracted is when *sha* -Neg2- is not present in the sentence as illustrated in (56), (57), (58), (59), and (60).

(56)	agidʒ	ur	iddi**n**
	no one	Neg1	go.PER.neg.**Part**

(57)	*agidʒ	ur	iddi**n**	sha
	no one	Neg1	go.PER.neg.Part	Neg2

(58)	*agidʒ	sha-ur	iddi**n**
	no one	Neg2-Neg1	go.PER.Part

(59)	*agidʒ	ur	iddi**n**	sha	~~agidʒ~~
	no one	Neg1	go.PER.neg.Part	Neg2	~~no one~~

(60)	*agidʒ	sha-ur	~~sha~~	iddi**n**	~~agidʒ~~
	no one	Neg2-Neg1	~~Neg2~~	go.PER.Part	~~no one~~

Notice that the subject NCI extraction, like any other Subject-extraction namely Subj-Wh, Subj-Relative, and Clefting, yields AAE, and (57)–(60) are ungrammatical only due to the occurrence of *sha* in the clause. Given (57) and (58), the question that arises is why are they ungrammatical?

Looking at the representation of (57) in (61) below, we see that *sha* "Neg2" intervenes between Neg1 and the NCI. The NCI cannot have its focus feature valued and deleted prior to its movement causing an LF crash.

(61) *[$_{CP}$ agidʒ [$_{NegP}$ [$_{Neg}$ ur [$_{TP}$ iddin [$_{vP}$ sha [$_{vP}$ ~~agidʒ~~ ~~iddi~~ ɣər-islan]]]]]
no one Neg1 go.PER.Part Neg2 ~~no one~~ ~~go.PER.Part~~ to-wedding

Leaving out *sha* is a repair strategy akin to leaving out agreement in subject extraction contexts. I therefore conclude that banning *sha* in these contexts is a form of Anti-Agreement.

8.5 The Neg Probe and the NCI Goal and the Dual Activity Puzzle

Let us now return to the dual activity problem that we raised in the previous section. As I pointed out, Watanabe (2004) proposes that NCI's bear a [-Interpretable] focus feature that renders them active, and evidently the [+interpretable] Neg-feature is not what makes them active. However he does not provide any answer to the question of what [-interpretable] feature the Neg-head bears? Neg-heads in languages such as Berber have to bear a [+interpretable] Neg-feature as discussed in the previous section, otherwise we will not be able to account for simple negative sentences such as (62).

(62) ur iddi
Neg1 leave.3sm.**neg**.PER
"He didn't leave"

Before I lay out my proposal, there is an important fact that I have not discussed and which is relevant and crucial for the forthcoming discussion. It has to do with the negative verb form in Berber. As pointed out by Ouhalla (1988) and a number of other researchers, verbs in Berber have a negative form in negative contexts. If we compare the verb form in (62)

and the verb form in (63) we see that in the first example the verb inflects for negation as shown by the vowel *i*. This vowel mainly shows up in negative past sentences, the reason some grammarians refer to this form as the *Irrealis* form (IRR).

(63) idda ʕli
leave.3sm.PER Ali
"Ali left"

Recall from Chapter 5 that T-agreement (subject-verb agreement) is obtained when C transfers its φ-features to T. Given the clause structure argued for in this work, in negative structures, C selects Neg which selects T.

(64) [CP C [NegP Neg [TP T]]]

In fact a number of scholars argue that Neg c-commands T in English and Romance. Holmberg argues for this hypothesis for English, Romance and Finnish, Zanuttini (1996) argues that Neg selects T universally, and Hageman (1995) adopts this hypothesis given her analysis of West Flemish. A further question now is, given Chomsky's recent proposal that T inherits its φ-features from C and given my analysis of agreement in Chapter 5, how does C transfer its φ-features to T in such a structure, where T is immediately selected by Neg?

I propose the following:

(65) **C-to-Neg-to-T φ-feature Transfer**
C transfers its φ-features to Neg which transfer them to T.

I also speculate that Neg-head also transfers its Neg-feature to T in the process. As a result of T-agreement we obtain both subject-verb agreement and negative morphology on the verb in Berber (negative-agreement) as illustrated in (66):

(66) **[CP C [NegP ur [TP T [AspP iddi [*v*P ʕli]]]]]**
φ-Transfer φ +neg Transfer
Agree
Neg1 went.3sm.neg.PER Ali
"Ali didn't leave"

I take the negation morphology on the verb to be a phonological reflex of the Neg-feature transferred to T, and like φ-features, this Neg-feature transferred to T has no semantic interpretation. For example, a sentence with a verb in irrealis form and no Neg-head that is, *ur*, is ungrammatical as shown in (67), which is evidence that the negative morphology on the verb has no "negative force."

(67) * iddi ʕli
leave.3sm.neg.PER Ali
"Ali didn't leave"

Before we detail this proposal and its predictions it is worth mentioning that we do find languages such as Finnish where Negation in fact inflects for agreement as shown in (68):

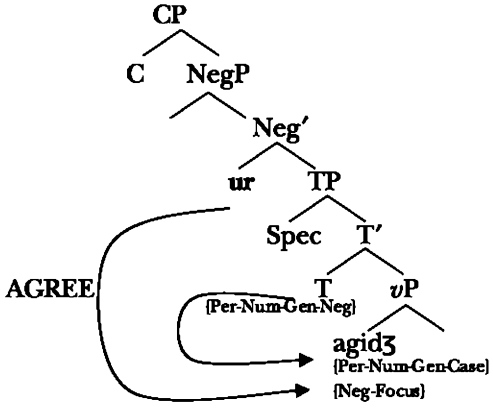
(68) Mina e-**n** puhu-**isi** ranskaa. (Finnish)
I *NEG-1SG* *speak-CON* *French*
"I would not speak French." (Holmberg 2003: 103)

This is exactly what one would predict given the **C-to-Neg-to-T φ-feature Transfer**. We find languages such as Berber where verbs "inflect" for negation and others such as Finnish where Negation inflects for agreement.

Consider the Tamazight Berber example in (52) repeated in (69) and represented in (70).

(69) ur iddi agidʒ
Neg leave.1ms.PER no one
"No one left"

(70)



The derivation of such sentences proceeds as follows (let us skip ahead to the step when C is merged):

a. C transfers its φ-features to the Neg-head and does not keep a copy of these features (DONATE). (Recall from Chapter 5 that C transfers its φ-features to T and does not keep a copy in declarative sentences)
b. Neg now has a Neg-feature and φ-features. The Neg-head then transfers both φ-features and the Neg-feature to T. Unlike in cases such as (66), this time the Neg-head retains a copy of these uninterpretable φ-features and it will therefore remain active, hence solving Watanabe's problem, and probe the NCI subject.[8]
c. T now has a Neg-feature and φ-features and probes the NCI subject. Subject-verb agreement and negation agreement (the negative perfective form) is obtained. T values the Case feature of the subject but does not value the "focus" feature.
d. The subject then remains visible to a higher probe that is, Neg-head which has uninterpretable φ-features and interpretable Neg-feature. Upon Agree the φ-features on the Neg-head are valued and deleted, and the focus feature on the NCI is valued and deleted.[9]

Almost the same operations take place when an NCI-object is involved as in (71):

(71) [$_{CP}$ C [$_{NegP}$ ur [$_{TP}$ T iswi [$_{uP}$ Ali walu]

φ-Transfer; φ+neg Transfer; Agree; Agree

Neg1 drink.3sm.neg.PER Ali Nothing

"Ali drunk nothing"

What is interesting is that we find sentences in Tamazight Berber where Subject NCI's and Object NCI's are extracted (as evidenced by the AAE on the verb when the NCI is a subject) and the Neg-head is left out as shown in (73) vs. (74) and (75) vs. (76). What is mostly interesting here is that negative perfective forms (that are obtained as a result of Neg transferring Neg-feature to T) are impossible in the NCI extraction cases.

(72) ur itʃ*i* **walu**
Neg1 3sm.eat.IRR nothing
"He ate nothing"

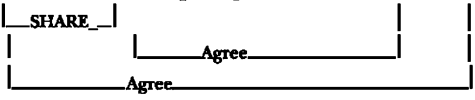
(73) walu (y) itʃa ʕli **(*itʃi)**
nothing (Comp) 3sm.eat.PER Ali (*3sm.eat. neg.PER)
"Nothing, Ali ate"

(74) ur iddi agidʒ
Neg 3sm.leave.neg.PER no one
"No one left"

(75) agidʒ (ag) iddan **(*iddin)**
no one (Comp) leave.PER.Part (*leave.neg.PER.Part)
"Nobody left"

If we take (73) for example and examine its structure in (76), the absence of *ur* indicates that Neg1 is not projected in the structure as shown below. Consequently C has the option of transferring its φ-features to T (not through Neg-head because Neg-head is not projected). In this case C also keeps a copy of φ-features as a result we get both T-agreement and C-agreement, and we do not get the negative agreement because no Neg-feature has been transferred to T.

(76) **[CP walu ay [TP T [AspP itʃa…[vP Ali ~~walu~~]**



These fascinating facts, besides the cross-linguistic evidence that Neg inflects for agreement in some languages, may serve as evidence for the C-to-Neg-to-T φ-Feature Transfer. More research remains to be done and more languages need to be looked at to evaluate the predictions that this proposal makes; something that is beyond the scope of this book. I will conclude this chapter with a note on the seemingly counter-cyclic aspect of this analysis. Chomsky (2006, f27) recognizes this about the C-to-T φ-feature transfer or inheritance and he writes:

> It is sometimes felt intuitively that "inheritance" is counter-cyclic, but technically that is not the case, any more than the (somewhat similar)

> probe-goal relation that determines structural Case in situ, for example. (Chomsky 2006: 13)

The next and final chapter of this book brings all the facts about subject-verb agreement, clitic doubling, and negative concord together and discusses some advantages of unifying them as related phenomena generated by the same mechanism namely: Agree.

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Chapter 9

Agreement Suppression Effects and Unification via Agree[1]

This chapter unifies the analyses proposed for agreement and AAE, negative concord, and clitic doubling. These three different phenomena as pointed out in the previous chapters have been analyzed as different and unrelated requiring different mechanisms such as Spec-head relation, co-indexation and Licensing via c-command. One of the goals in this book is to provide evidence that despite being a wide range of different facts, these three syntactic phenomena are generated by one mechanism namely Agree, as defined in Chomsky (2000, 2001a). We have shown that just as extraction affects subject-verb agreement yielding Anti-Agreement Effects (Chapter 5), it also affects clitic doubling yielding a ban of cliticization (Chapter 7), and affects negation yielding a ban of Negative Concord Adverbials (Chapter 8). These effects are not coincidental and provide, under proper analysis, further empirical evidence of unification under Agree. I will argue below that this has the advantage of eliminating construction specific accounts. Following Chomsky (2005), the "third factor" in "language design" is a set of general principles of efficient computation. Agree, to the extent that it is a computationally efficient operation, holds for any form of agreement. When this operation is inhibited, the suppression effects are uniformly displayed across all the seemingly disparate domains within which it applies.

9.1 Summary and Unification

As was discussed in Chapter 5 and is familiar by now, Local subject-extraction in Berber yields AAE as illustrated by the example in (1) which

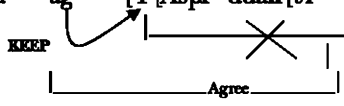
shows full subject-verb agreement and (2) which shows AAE:

(1) idda wərgaz ɣər ssuq
go.PER.3sm man to market
"the man went to the market"

(2) ma ag ddan ɣər ssuq?
Who Comp go.PER.Par to market
"Who went the market"

The analysis we developed in Chapter 5 is that AAE is a result of the application of the inheritance mechanism KEEP. This inhibits an Agree relation between T and the subject from taking place hence AAE morphology on the verb, and causes an Agree relation between the C and the wh-subject hence the obligatory Comp as schematized in (3):

(3) [CP **ma** **ag** [T [AspP **ddan** [*v*P ~~**ma**~~ ~~**ddan**~~ [VP ~~**ddan**~~ **ɣər ssuq**]]]]]



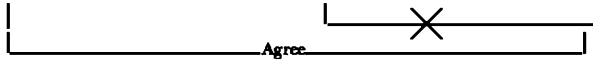
In Chapter 7 we showed that in clitic doubling constructions, the optional dative clitic as in (4) cannot co-occur with an extracted indirect object as shown in (5). This makes it similar to subject-verb agreement which cannot co-occur with an extracted subject (AAE).

(4) wʃix (-**as**) ləcθæb i-Məryəm
gave.PER.1s (-**her**) book to-Merriam
"I gave Merriam a book"

(5) ma ami wʃix (-*as) ləcθæb
Merriam Comp give.PER.1s -(*her) book
"who did I give the book to"

The analysis proposed is that clitic doubling involves an Agree relation between the clitic head and the double-DP and extraction of this DP to the left-periphery inhibits Agree from taking place.

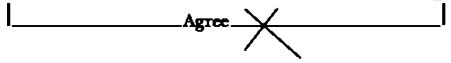
(6) *[$_{CP}$ ma ami [TPwʃix [CL$_{DAT}$ as wʃix ləcθæb ma]]]]



The third form of agreement discussed in this book and specifically in Chapter 8 is negative concord. The negative head *ur* licenses negative concord elements and Licensing is obtained via an Agree relation. When the negative element *sha* intervenes between the Neg-head and the NCI it inhibits establishing an Agree relation between them as shown in (7) and schematized in (8):

(7) ur iddi (*sha) agidʒ ɣər islan
Neg1 go.PER.neg.3s Neg2 no one to wedding
"no one went to the wedding"

(8) **ur iddi (*sha) agidʒ ɣər islan**



In Tamazight Berber, *sha* can appear preceding *ur* (Neg1) and when it does, *ur* can license NCI's as shown in (9):

(9) sha ur iddi agidʒ ɣər islan
Neg2 Neg1 go.PER.neg.3s no one to wedding
"Nobody went to the wedding"

However when the NCI is extracted, *sha* is barred altogether.

(10) agidʒ (*sha) ur iddi (*sha) ɣər islan
no one (*Neg2) Neg1 go.PER.neg.3s (*Neg2) to wedding
"Nobody went to the wedding"

It is apparent that certain argument extraction inhibits agreement. Subject extraction yields AAE, Object extraction yields a ban of clitic doubling, and NCI extraction yields a ban of the negative concord element Neg2. I believe that this is not a coincidence and provides further evidence of unification under Agree.

9.2 Against Spec-Head Criteria

If the analysis of unifying subject-verb agreement, clitic doubling, and negative concord is on the right track then it would have a very important theoretical implication regarding the different criteria proposed in the literature to account for these types of phenomena. Chomsky (2001a, 2004, 2005, 2006) dispenses with Spec-agreement and argues for a Probe-Goal syntactic relation under which Agree is established. Overt movement is not a precondition for Agree to take place. Therefore, one does not need criteria such as (11):

(11) Wh/Neg/clitic-Criterion
  a. The *wh*-Criterion (Rizzi 1990: 378)
    1. Each +WH X^0 must be in a Spec-head relation with a WH-phrase
    2. Each WH-phrase must be in a Spec-head relation with a +WH X^0.
  b. The *Neg*-Criterion (Haegeman and Zanuttini 1996: 153)
    1. Each Neg X^0 must be in a Spec-head relation with a Negative phrase
    2. Each Negative Phrase must be in a Spec-head relation with a Neg X^0
  c. The Clitic Criterion (Sportiche 1996: 236)
    1. A clitic must be in Spec-head relationship with a [+F] XP at LF.
    2. A [+F] XP must be in a Spec-head relationship with a clitic at LF.

Spec-head relation is not required (at least overtly) for the three criteria to be satisfied.

To conclude, despite an apparently disparate range of empirical facts, subject-verb agreement, clitic doubling and negative concord are all cases of agreement obtained via the same mechanism namely Agree. This is by no means a claim that subject-verb agreement, negative concord and clitic doubling are identical but that that they adhere to the same general principle. How universal is the analysis is left open. According to Chomsky, "third factor" in "language design" is a set of general principles of efficient computation. Agree, to the extent that it is a computationally efficient

operation, holds for any form of agreement. When this operation is inhibited, the suppression effects are uniformly displayed across all the seemingly disparate domains within which it applies. I showed how agreement in these three different syntactic phenomena can be obtained through the same syntactic relation, and how in all three cases this relation involves the same structural relation namely C-Command. I also showed that in Berber, certain argument extraction inhibits agreement. Subject extraction yields AAE, Object extraction yields a ban of clitic doubling, and NCI extraction yields a ban of the negative concord element Neg2. I believe that this is not a coincidence and provides further evidence of unification under Agree.

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Chapter 10

Conclusion

One of the main goals I hope to have achieved in this work is to show that agreement as feature sharing is not restricted to arguments and predicates. Languages such as Berber exhibit a variety of contexts where other elements must agree; for example clitic doubling, and negative concord. I argued that despite an apparently disparate range of empirical facts, subject-verb agreement, clitic doubling and negative concord are all cases of agreement obtained via the same mechanism namely Agree, which according to Chomsky (2005), is a direct consequence of Merge. In all these cases, we see that when a Probe is merged, be it T, the clitic or Neg, it searches for a Goal with matching features with which it enters into a Match-Agree Probe-Goal relation. This mechanism yields satisfaction of the interface conditions at PF and LF. PF uninterpretable features such as φ-features on T and LF uninterpretable features such as Case on DP cause Crash, therefore they " must be treated as what Juan Uriagereka (1998) calls a 'virus': eliminated as soon as possible . . ." (Chomsky 2005: 17). Given this "Minimal" set of the premises, we hope to maximize explanatory depth over a wide range of empirical phenomena.

I showed how agreement in the three different syntactic domains in question can be obtained through the same syntactic relation, and how in all three cases this relation involves the same structural relation namely C-Command. I also showed that in Berber, certain cases of argument extraction inhibit agreement. Subject extraction yields AAE, object extraction yields a ban of clitic doubling, and NPI extraction yields a ban of the negative concord element Neg2. I provided an analysis that accounts for how these effects are not coincidental.

Given Chomsky's (2004, 2005, 2006) proposal that T inherits its φ-features from C, I argued that the hypothesis that C is first merged from the lexicon bearing φ-features allows three logical possibilities namely: (a) C transfers

its φ-features to T (DONATE), (b) C does not transfer its φ-features to T (KEEP), and (c) C transfers its φ-features to T and keeps a copy (SHARE). I argued that all these options are possible, and that they might be "ordered" naturally under principles of efficient computation that is, economy and "Minimal Search," with (a) DONATE being the most "economical," and (c) SHARE being the last resort and least "economical." I extended the same analysis to negative clauses within an approach where C selects Neg which in turns selects T. Given such an approach, I addressed the question of how T inherits the φ-features from C with the presence of an intervening Neg-head. I proposed that the φ-features are transferred from C to T via Neg and showed empirical evidence, such as the irrealis verb form in Berber and inflected negation in Finnish, which, hypothetically, results from such transfer.

It remains to be seen if this analysis can be extended to the *v*P domain, given Chomsky's hypothesis within DbP (Chomsky 2001a) that V is to *v* what T is to C. It will be interesting to see if DONATE, KEEP, and SHARE, which are hypothetically attested between C and T are also attested between *v* and V. It will also be interesting to see how this relates to unaccusatives, accusatives and double object constructions. Besides these two open questions, there are other questions that are worth pursuing. For example, why do certain features participate in "Transfer" whereas others do not? As detailed in Chapter 5, φ-features are transferred from C to T, but the wh-feature, or any other left-periphery feature for that matter, is not. Also, are there differences in "Transfer" for different languages? In Chapter 5, I suggested that DONATE is "used" to derive declaratives in English whereas KEEP is invoked to derive wh-questions; how does the analysis explain the subject-object asymmetry in English? If DONATE, KEEP and SHARE are Universal, is ordering, provided it is needed, parameterized? All these are potentially interesting questions that need to be addressed if one considers extensions of the φ-Feature Transfer model. I hope that this book succeeds in showing compelling evidence for Feature Transfer and that it paves the way for research on the topic on a larger scale.

Notes

Chapter 1

As cited in Corbett (1998: 191).

[2] The idea of agreement requiring a Spec-head relation will be referred to as Spec-head agreement.

[3] Adapted from Epstein, Seely and Pires (2005).

Chapter 2

[1] Tamazight is also the name of one of the major dialectal families (see section 2.2) in Morocco and is the name of the dialect described in this work. I will therefore use the term "Berber," stripped from any of its historical connotations, when referring to the language family to avoid any confusion.

Chapter 3

[1] See Ouali and Pires (2005) for a discussion of this topic with regard to Complex Tense constructions in Berber.

[2] The definitions of Government are adapted from Hornstein, Nunes and Grohmann (2005).

[3] The main motivations for Pollock's proposal have to do with the distribution of the verb in French and English and the distribution of finite verbs compared to non-finite verbs in French. The finite verb always precedes sentential adverbs like *souvent* 'often' in French (i) whereas the finite verb follows sentential adverbs in English (ii):

i. Jean embrasse souvent Marie (French)
ii. John kisses often Mary

Given the assumption that adverbs like *often* are adjoined to VP the sentences above indicate that in French the verb moves 'overtly', whereas in English it doesn't. Having established that, Pollock also discusses non-finite verbs and their distribution with regard to sentential adverbs. It turns out that French non-finite verbs also precede adverbs like 'often' (iii) unlike their English counterparts (iv):

iii. Jean essaye d' embrasser souvent [$_{VP}$___Marie]
iv. John tries to often [$_{VP}$kiss Mary]

However in contexts with sentential negation the two languages behave similarly in that the non-finite verb can't precede negation (French (v), English (vii)). When combining negation and sentential adverbs the two languages behave differently in that in French the non-finite verb follows negation and precedes the adverb (vii) whereas in English the non-finite verb has to follow both negation and the adverb (viii):

v. Jean essaye de ne pas embrasser Marie
vi. John tries to not kiss Mary
vii. Jean essaye de ne pas embrasser souvent [$_{VP}$____ Marie]
viii. John tries to not often kiss Mary

Pollock observes that in English both finite and non-finite verbs never move out of VP overtly. In French, finite verbs move all the way to a position preceding both negation and adverbs (ix) whereas nonfinite verbs move to a position between negation and adverbs:

ix. Jean n'embrasse pas souvent Marie
John Neg kiss Neg often Mary

Pollock's argument is that if there is only one Infl position where the verb moves then we can not account for French infinitives. He therefore proposes two different Infl projections, TP and AgrP, that were later adopted by Chomsky.

[4] Note that this presupposes that only left adjunction is allowed, a proposal that was later argued for in Kayne 1994.
"Agr complex" in this new context refers to Agr and T that adjoins to it by head movement, as opposed to Infl in GB.

[6] In fact AgrOP was proposed to make the mechanism under which Accusative Case and object-verb agreement are obtained, parallel to how Nominative Case and subject-verb agreement are also obtained or checked. Although English, unlike for example, Hindi (see Mahajan 1993) does not show overt object agreement, the object Agreement features are still checked via Spec-head with AgrO^0, to which the verb moves. Case is collapsed with morphological agreement, that is, they are both checked by Spec-head relations. Consequently Accusative Case requires "object shift" and the Case Filter cannot be restricted to overt syntax.

[7] Chomsky (2005: 12) notes the following about External Merge and Internal Merge (Move):

Unless some stipulation is added, there are two subcases of the operation Merge. Given A,
we can merge B to it from outside A or from within A; these are external and internal Merge,
the latter operation called "Move," which therefore also "comes free," yielding the familiar
displacement property of language. That property had long been regarded, by me in particular, as an "imperfection" of language that has to be somehow explained, but in fact it is a virtual conceptual necessity.

[8] There is in fact what appears to be confusion in the literature as to what Agree is. Agree is an operation that takes place as a result of a establishing a Probe-Goal relation. Thanks to Daniel Seely for pointing this out to me.

[9] These definitions are adapted from an earlier draft of Ouali and Fortin (2007).

[10] I will use the word participle (Part) throughout this book to gloss the impoverished form of agreement marking AAE, following the foot steps of traditional Berber grammarians and of Ouhalla (2005b).

[11] Ouhalla (2005b) presents an interesting analysis that shows that Anti-Agreement is a result of merging a featurely impoverished participle that in return requires merging a T specified for the feature [Class]. The requirement to check this feature forces DP movement through Spec, TP, hence the correlation between subject extraction and AAE. Ouhalla's approach does not assume Chomsky's hypothesis that T inherits its phi-features from C. I will therefore not review his interesting work here.

Chapter 4

[1] The Construct form and free form are not marked in the English gloss throughout this work.

[2] See Zwart 1998 for arguments against a V-to-C analysis of the verb placement in Languages with Verb-second effects.

[3] *ad* is the counterpart particle of *að* found in other Tamzight dialects as well as in Tarifit and Tashelhit.

[4] la itʃa is pronounced [lajtʃa].

[5] la itəddu is pronounced [lajtəddu].

[6] Some Tamazight dialects also exhibit third person plural feminine agreement.

[7] One of the long standing arguments that was presented in favor of a Neg projection is the blocking effect Neg has on the verb movement to I in English. It has been argued (Pollock 1989) that the reason why French allows V movement to I across Neg is due to the structural differences between negation in the two languages: while *ne*, in French, is a clitic occupying a head position and must, like other clitics in French move to TNS, *not* in English is the head of NegP but is not a (syntactic) clitic, hence it does not move and it blocks verb movement.

[8] I will use only *ay* as the default form when referring to these complementizers. The form *ag* is reported to exist in other Tamazight varieties such as Ayt Ndhir dialect (Penchoen 1973) and the Tamazight dialects of Ayash and Ayt Seghrouchen (Abdel-Massih 1971). There is no mention of this form in Boukhris (1998) which describes a Zemmour Tamzight dialect.

[9] The complementizer *lli* found in the dialect described in Boukhris (1998) is the same as the complementizer found in relative clauses in Moroccan Arabic.

[10] The cluster *ay-i-mi* is phonetically fused as *aymi*.

Chapter 5

[1] Notice that this assumption is very crucial and seems to be unavoidable. If we reverse the situation and assume that C bears a [-interpretable] wh-feature whereas the wh-word bears a [+interpretable] wh-feature, the feature on C will not get valued. Why? Because T, having received φ-features from C will probe

the wh-subject and Agree with it. After this takes place the wh-subject becomes inactive because the only feature that made it active was the unvalued Case. C will not get its wh-feature checked and the derivation will crash.

[2] This review of the previous analyses is by no means exhaustive. One example of some of the important work that I have left out is Elouazizi and Wiltschko (2006) which deals mainly with the categorial status of agreement.

[3] By suppressed I mean T never received the φ-features from C, forcing default agreement morphology to appear on the verb (AAE).

[4] Of course one could ask the question why doesn't C transfer both φ-features and the wh-feature to T in wh-questions for example, and have T probe the subject and value both its Case and wh-feature, since T now, under this alternative analysis, would bear a wh-feature? Maybe this is the case, and maybe AAE is a morphological reflex of this. In fact this might also explain why we get the same subject-verb agreement in declaratives and subject wh-questions in English. I will leave this alternative open for future research.

Chapter 6

[1] The *ay* and *ur* sequence is pronounced as: *awr*

[2] Ouhalla (1988) proposes a filter-type condition which requires that the clitics attach to the highest "affixal" head. This condition is descriptively accurate only to a certain extent. Crucially, it does not explain how the order of clitic clusters with their different hosts is derived. Given (19) above and the structure below, Ouhalla (1988) assumes that the dative clitic (e.g. *as*) adjoins to the accusative (e.g. *t*) and then right-adjoin to the verb and the whole complex moves to I.

i. $[_{IP}$ wshix-as-t $[_{VP}$ $[_{DP}$ $[_{DP}$ (cf. (16)
gave-him-it
"I gave it to him"

Besides allowing right adjunction, the clitic host is not always the highest "affixal" head, contrary to what Ouhalla's condition predicts. The clitics in the following example are attached to the tense auxiliary but the highest "affixal" head is the complementizer:

i. $[_{CP}$ arba ay $[_{NegP}$ ur $[_{IP}$ da –as$_i$-t$_j$ $[_{VP}$ iwshen $[_{DP}$ t$_j$ $[_{DP}$ t$_i$
the boy that not will-him-it give
"the boy who will not give it to him"

[3] See Makhad (2004) for detailed arguments against Dell and Elmedlaoui's (1991) view that *ar* in Tashelhit and *la* in Tamazight are aspectual markers. See also Ouali and Pires (2005) and Ouhalla (2005a).

[4] Like Tamazight Berber and unlike Tarifit Berber, negation always precedes the tense particle and the verb in Siwa as shown by the following example:

i. la g isu aman Laoust (1932: 55)
Neg Fut drink.AOR.3s water
"he will not drink water"

Chapter 7

[1] Ouhalla (1988, 2005a) argues following Guerssel that this preposition is a Case marker rather than a true preposition.

[2] I have assumed that clitics in these cases are specified for an uninterpretable wh-feature, which raises the question of how the wh-feature of the clitic in (44) gets valued. I leave this as an open problem for this analysis.

Chapter 8

[1] Some parts of this chapter also appeared in Ouali (2005).

[2] I will transcribe Neg2 as *sha*, as frequently used in the literature, instead of its phonetic representation [ʃa] which I used in the previous chapters. Otherwise the voiceless palatal fricative sounds will still be transcribed as [ʃ].

[3] From this point on I will be using primarily Tamazight data.

[4] Tamazight seems to be an exception among the other Berber dialects in this regard. In Taqbaylit, Tarifit and Chaoui, the counterpart of ***sha*** namely ***kra*** cannot occur pre-verbally.

[5] Or stands for Orientation affix.

[6] A question may arise regarding how this interacts with the proposal that *ne* moves away from *pas* when it raises to before Spec-TP, contrary to what seems to happen between *ur* and *sha*. It could be that *ne* licenses *pas* after it moves or that *ne* is first merged in higher position. I leave this as an open question.

[7] Other researchers have argued against the activity condition and if they are right then this does not pose a problem here.

[8] As mentioned before, given Watanabe's (2004) analysis according to which the Neg-head is specified for [+interpretable] Neg-feature, it is unclear what makes it act as a probe (since it lacks unvalued uninterpretable features).

[9] It is not clear why we do not get double negation following this analysis, because both the Neg-head and the NCI have [+interpretable] Neg-features. Watanabe (2004) tries to get around this problem by using a copy mechanism which works as follows: When the Neg-head agrees with the NCI it copies its Neg-feature. Now the Neg-head has two Neg-features. At LF we get Neg-head with two Neg-features and the NCI with one Neg-feature. Two Neg-features cancel each other out and we end up with one negative interpretation. For Watanabe, this mechanism deduces Haegeman and Zanuttini's so-called Neg-factorization in (i):

i. Neg-Factorization:
$\neg X \neg Y \neg Z = \neg(X, Y, Z)$

Chapter 9

[1] Some parts in this chapter appeared in Ouali (2006b).

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Index

φ-features
  C-to-T σ-features transfer 31, 77

A′ movement 59
adjacency condition 118–19
adjuncts 72, 100, 118
  head to head adjunction 109–10
Agree 24–7, 34–5, 56, 76–80, 89–90, 103, 178–9
  Agree vs. Move 103
  French vs. Berber 155–6
  paradigm 58
agreement 57–60
  C-agreement 32, 95–8
  C-Subject agreement 83
  C-Wh-Phrase syntactic Agree 88
  features 13–15, 84
  morphemes 2, 15
  morphological inflection 13
  noun-verb 25
  Spec-head agreement 17–21, 23–5
  subject-verb agreement 3, 21, 27–8, 76–103
    subject-verb agreement configuration 81
  T-agreement 32, 90–3
  T-Subject Agree 83, 88
Anti-Agreement Effect 3–4 31–2, 58–9, 81–91
  Anti-Agreement Effect configuration 81
anti-negative concord 156
articulatory-perceptual system 23
Aspect 41, 50
  aorist 42–3
  imperfective 42–3
  irrealis 42–3
  perfective 42–3
attract 23
  attracting heads 112–15

Baker, Mark 85–8
BE-verbs 55
Boukhris, Fatima 105, 112–19

C-command 17, 24
C-to-Neg-to-T φ-Feature Transfer 33, 161
C-to-T σ-features transfer 31
Case
  Accusative 17, 22
  Nominative 17, 20
Case checking 22
Chomsky, Noam 15–16, 21–2, 24, 31, 76–7, 87–8, 164–5
clitic 2
  Accusative clitic 110
  climbing 55, 147
  Dative clitic 110
  doubling 27–8, 34, 129–31
    dislocation and position 131–5
  movement 105, 112, 116–17
  pronominal clitics 5, 41, 62, 72, 106
    distribution 105–27
clitic criterion 134
co-occurence restriction 2
complementizers 46, 68–73
conceptual-intentional system 23

DONATE 4, 78–9, 88–90, 94–8, 163
DONATE, KEEP, and SHARE application order 101–3

Exceptional Case Marker (ECM) 47
extraction
  direct object extraction 35, 98, 100, 169
  subject extraction 34–5, 58, 79–81

Goal 25–6
Government 2, 15–19

head-complement relation 19–20

Kayne, Richard 34
KEEP 4, 90–3, 97–8, 168

m-command 18
Merge 24, 29
merging hypothesis 118

negation 3, 62–8, 143–55
Negative Concord Item (NCI) 27, 143, 150
  test 150
Negative Polarity Item (NPI) 143
  test 150

orientation particles 61–2
Ouhalla, Jamal 39–41, 82–4

Phillips, Colin 84
Probe 25, 26
Probe-Goal Locality Condition 33, 141

Quebliyeen Tamazight Berber 7, 28
  Aspect 41
  clause structure 73
  negation typology 144
  tense 43
  word order 37

Richards, Norvin 85

Schneider-Zioga, Patricia 85–9
SHARE 4, 93–100, 174
Spec-head agreement 18–19
spell out 24–7, 119
subject wh-extraction 59, 79, 95

Tense 43–50
  complex tense 52
  interaction with Aspect 50

verb movement 121

Want-verbs 55